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THE STANE STREET

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The Redlands. Moonrise.

THE STANE STREET

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BY

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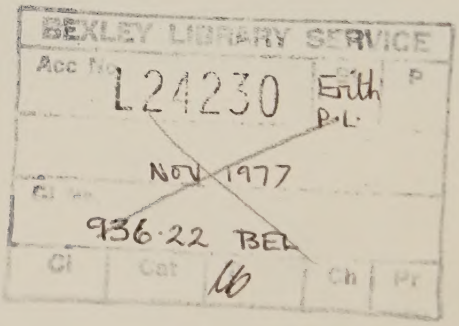

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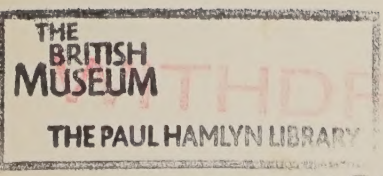

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PART I

THE ROMAN ROAD IN BRITAIN

THE STANE STREET

PART I

THE ROMAN ROAD IN BRITAIN

I

The foundation of England is a Roman foundation, as is, indeed, the foundation of all the West. Once beyond that fringe of ancient city-states which bordered all the Mediterranean, and whose origins are older than known history, the civilisation of Barbary as of Gaul, of Iberia as of the Germanies, of Britain as of the Netherlands, is a Roman thing; nor is it possible to prove one institution or one inherited handling of material things to have descended to us from the outer barbarism.

This Roman civilisation was everywhere slowly transformed, and proceeded from what

we may call its antique or pagan origins, to what we now have as modern Europe.

It is impossible to point to any date or period which separates the Roman advent of our culture from its present phase, but the chief mark of Europe, which is its religion, dates its origin from the Incarnation of Our Lord: that is, about half a century after the Roman occupation of Gaul, and as much before the Roman occupation of Britain. Coincident, therefore, in the West, with the era by which we date our years, is the universal prevalence of a Roman order, and during all those twenty centuries our things and our ideas throughout all changes have preserved their identity and have remained in substance the same.

Nevertheless, it is historically convenient to speak of certain things in Gaul or Britain, the Germanies or Spain, as in a special and older way "Roman." We talk of a "Roman" road, a "Roman" bridge, "Roman" tiles, &c., and we mean by such a term the work of the first four or five centuries.

The Roman order in the united civilisation of the Western Empire was continually disturbed by civil war and occasionally by

barbaric invasions. More important than either of these as a factor of change was the internal transformation of the *army* upon which that civilisation reposed. This institution, from originally free and indigenous, became as to its personnel largely servile in origin and barbaric in blood. Its most active portion grew to be auxiliaries and later allies or "federates" serving under tribal chiefs, who ultimately assumed local executive powers and developed into kinglets. These, though they continued to regard Rome as their head, at once controlled local Government, and, by their inefficiency, caused it, through no desire of their own, to grow more and more independent of the central power. To this main cause of disintegration a multitude of other causes—the exhaustion of the mines, perhaps depopulation, certainly disease—contributed. Our civilisation fell on its material side into a phase of decay, and the outward manifestation of this misfortune took a precise historical form. The central Government of the emperors slowly ceased to be effective. It was never overthrown, it was never denied; but it faded out of real politics, and slowly, unconsciously, of no set purpose,

local Governments took its place. These Governments were administrated, as I have said, very commonly by the chiefs of the auxiliary and "federate"[1] forces in the army (hence the terms "king of the Franks," "of the Goths," &c.); but these in turn were socially dependent upon those immensely wealthy landowners, principally Italian, Gallic, Iberian, or British in descent, whose monopoly of the means of production was the mark of the period, and whose power was the outstanding political mark of the Dark Ages.

All this great change, which transformed the originally active and highly centralised civilisation of the early centuries into the local, dulled, autonomous, and aristocratic society of the Dark Ages, had its turning-point in the fifth century.

From the entry, with the sixth century, into the Dark Ages, it is probable that no

[1] Upon the exact meaning of this word "Foederati" discussion still turns, for it is a principal criterion of the decline. I have no room to examine it in so slight an essay. It must be sufficient to say that the "Federates," though a true part of the Roman army, seem to have been more autonomous and more domestically organised under hereditary chiefs than the "Auxiliaries."

more great public works were undertaken in the Gauls. Repairs—sometimes on a great scale—are discoverable in the seventh century, and even in the eighth,[1] but Rome no longer ruled or made. Pillaging and savage hordes, seafaring pirates and wanderers from over the border, though few in number, could molest the civilised inhabitants of the frontiers in a manner if not graver, at least more permanent than that of the earlier barbarians. The whole body of civilisation had weakened and grown old.

It is on this account that we distinguish verbally between the Imperial Government of the first four centuries and what survived of it into the fifth, and the half-barbarous Governments succeeding it in the North and West during the next 500 years. The earlier undertakings, which are stamped everywhere with the mark of vigorous, lively, and united administration and of high material powers, we call *Roman*. Not, I repeat, because any line of division can be established between

[1] *E.g.* the great Roman roads of Northern Gaul appear from tradition to have been thoroughly restored in one great effort more than a century after the disappearance of the Imperial coinage.

the origins and the later developments of our civilisation, but as a convenient term whereby to denote the particular type of early public works in question.

II

The material evidences of our common Roman foundation are, in some departments of them, better preserved in the province of Britain than in any other part of the Imperial West.

In the matter of buildings we are less fortunate than Gaul or even the Germanies: far less than Spain or Africa. But in certain matters we have superiority over any other province of the Empire in our relics of Imperial times, and these are particularly *hoards of money* and *roads*.

The reason that this type of "Roman remains" stands out in Britain more than in the other provinces, is the same as that which has destroyed so much of Roman buildings, and is twofold: it is, in part, the fact that Britain was the remotest province of the West: in part, the fact that the barbaric

raids which followed the breakdown of central authority were, if not more severe as wars, at least of more destructive effect here than elsewhere.

Each of these two things is connected with the other. It was the remoteness of Britain and its separation by the sea which caused it to be so early and destructively attacked by the pillage of barbarians—Irish, Caledonian, German, roaming slaves escaped, &c.—and its remoteness also which lessened the importance of its Roman buildings. The distance and isolation of Britain presumably left that province with less magnificent monuments than those of the Continent and of Africa, while the same distance and isolation left it open to so many and such ruinous raids.

At any rate, early in the story of the central power's decline, Britain was subjected to incursions from the barbaric inhabitants of Ireland and of Scotland, and even to raids led by pirates from across the sea; from Frisia and from what is now the junction of Denmark with the German Empire, and from the mouth of the Elbe and from the mouth of the Weser; with these must certainly have been mixed, as in the case of

the Vandals, a very large proportion of the internal wreckage of society, the escaped slaves, the brigands of heath and woodland, the ruined men.

The Roman Empire stretched its authority along the North Sea coast of the Continent as far as the last mouths of the Rhine: Utrecht was perhaps its outpost. North and east of that, the flat and shallow shore managed to raise even from the sparse inhabitants of its poor soil, crews of pirates who harried Britain in company with the barbarians from beyond the Irish Channel, the barbarians from beyond the limits of the Empire on the Clyde, and the hungry enemies of society within.

It was in the beginning of the fifth century that certainly the major part of the Roman regulars left Britain for a Continental campaign from which perhaps they were scheduled to return, but from which, as a fact, they did not. Of their many departures from this island upon Continental expeditions this was the last. An army had often left Britain before at the summons of the central Government or a usurper. It may be that such expeditions had often emptied the garrison

of the island. But hitherto they had come back. After the first years of the fifth century no Roman regulars *returned* to this island, though many may have *remained* in it. A generation later, in the midst of the fifth century, the barbaric raids upon civilised Britain grew serious: somewhere about 450, if tradition (though slight and confused) be any guide, the pressure began to be incessant. What happened during the next 150 years we shall never know. It is blotted out of history, save for a few legends and old fables. If we look for documents, we find exactly *one* very brief clerical rhapsody, contemporary indeed, but little more than a denunciatory sermon in character, and as a guide to what came before it, almost as unreliable as the much later romances of "Hengist" and "Horsa" and the rest.

At any rate, Roman civilisation upon the southern and eastern shores of Britain slowly fell and fell until it had sunk to a depth far lower than was to be discovered in neighbouring Gaul and rather resembling the contemporary state of the Netherlands.

Now, Britain is an island; and the communications between it and the world lay

precisely through these southern and eastern shores which the barbarian had ruined. Britain was "cut off" even more thoroughly than Africa. Its moral life quickly starved and its supply of moral sustenance was checked. That the barbarians were few and held but a narrow belt of sea coast was no mitigation of the disaster, for the little those few held constituted the very gates of the province. Popular dialects, Celtic in the west, Teutonic in the east, replaced the Roman official tongue. We know that the Church survived, though mutilated, in the west of the island: on the eastern shore and even up the Thames valley it seems to have disappeared. The Roman order, the Roman power of building and devising, failed, if not more suddenly, more thoroughly in Britain than in any other province. The towns must have survived; but, as everywhere, the contemporary record of them is lost, and in general, from the departure of St. Germanus in 447 A.D. to the landing of St. Augustine, precisely 150 years later, the history of Britain is blank.

When positive history and contemporary records return, which is not until the end

of the sixth or the beginning of the seventh century, we have the impression of a province fallen into an anarchy far more complete than the contemporary societies of Europe, and the Faith itself had to be laboriously reintroduced into the eastern littoral belt, reformed elsewhere, before Britain could take its place again as a member of the European family.

Now, the first effect of all those catastrophes must have been to destroy more buildings and other easily destroyable things in Britain than on the Continent. But there was to this misfortune a compensating advantage for history, and the same barbarism which ruined what was destroyable, fossilised, as it were, what was resistant to mere violence and loot. The evidence for *roads*, the great system of communications, especially benefited by a misfortune that had arrested the continuous activity of civilisation.

In the case of the *British* roads, there was none of that slow if declining repair, possibly even that extension of the road system, which Gaul seems to have preserved for some time after the fall of the central Government. The Roman roads of Gaul, of Lower and

Upper Germany, still more of Italy, are in our day like a palimpsest. Often we cannot be certain of the original Roman direction: more commonly it has been modified or obliterated by continuous use and its accompanying changes. But in Britain the end of this Roman work was left, as it were, fresh from the workshop: the interruption in its use preserved it by the very accident which destroyed so much other contemporary work around.

III

The Roman road, then, has been preserved in this country in a fashion both absolute and peculiar. You find it less changed, more discernible, than elsewhere, when it *is* in evidence: yet when lost, more utterly lost, and its continuity in repair interrupted.

The importance of such evidence to the history of Britain and of Europe, it is difficult to exaggerate; for the roads of Imperial Rome were the very framework of her power.

It is a commonplace of history that the first act of Rome on occupying a district, was to establish her system of municipalities

and to connect them by an extension of her system of roads. But this, though a commonplace in words, has not entered into the visual concept of Europe upon which the historian works. The West is not pictured in the mind of the modern historical writer when he attempts to tell its story as its Roman map would show it. His vision does not include those superb lines of definite purpose, running ruled and accurate, in a strong mechanical system, across the countrysides of Britain, of Spain, and of Gaul. He does not see the landscape of our world pinned to that strict pattern as he should. Did men fully comprehend the historical signification of those rigid lines, that physical comprehension would strongly aid a just comprehension of our origins.

The reader will see later in this book (and I shall use it as an argument), that, until the resurrection of European culture in the epoch of the Crusades, the Roman roads account for the site of most battles, of most great monasteries, of most marts, of most palaces: for the development of all campaigns.

That the Roman roads gradually declined

is certain; but that, for centuries, nothing but water-carriage could take their place, is more certain still; and until the sudden florescence of the Middle Ages they remained the skeleton of the European organism.

To recover a Roman road, therefore, to establish its exact alignment, even in detail, is not one of those half-futile historic tasks, whose achievement ends in itself. The research has indeed its "sporting" side. It presents all the fascination that attaches to any form of hunting, with that element added which comes from the tracking of a trail in the open air; and if the establishment of a Roman road had no other excuse but this element of interest, the excuse would be ample for the work involved.

But it has, as I have said, a much wider interest, and a more extended usefulness. To establish in anything like completeness the scheme of roads in a Roman province is to apprehend the physical basis upon which reposed that old, centralised, Imperial power to which the desperate survival of Europe clung. It is, further, to comprehend the relationship of town with town, of garrison with garrison, and of bishopric with bishopric.

It is an explanation of the passage of armies, of commerce, and of ideas, for just over one thousand years. The advance of a language or its retreat, the rise and the decline of a market, the barriers that could be set against invasion, the limits reached by a raid of barbarians, the propagation of the Faith, the communication of disaster or revival,—all these things are understandable when the Imperial scheme of roads is understood; and the whole business of the Dark Ages during which our civilisation melted down, as it were, to recrystallise in the Middle Ages, is, on its material side, explicable by a reference to the Roman military ways.

To understand what held out against the Asiatic in Spain and why, the two great roads over the Pyrenees must be clearly seized. One cannot understand what Austrasia was, for instance, and why it had a Roman soul, unless one has followed upon the map (or better, on foot) the paved *viæ* which radiate from Maestricht, Utrecht, Aix, Treves, Cologne, Bavai, Arras, Rheims, Chalons, Toul, Verdun, and Bar.

The error which has regarded Austrasia as fundamentally Germanic (an error typical

of so many others) could not have arisen had its authors comprehended that intersecting net-work of ways. Austrasia was in frame-work and being a Roman thing.

So with all the other problems and errors attaching to our origins. The Roman road is the chief material mark set by the Empire upon Western Europe.

IV

We have seen that the peculiar fate of Britain, its more complete or more disastrous harrying in the east, and its being cut off, by the ruin of the shore, from the rest of civilisation, gave the Roman roads in it a fate separate from that which fell upon them in other provinces. They were at once more necessary to a more barbaric society, and yet less kept up than in Gaul or in the Germanies.

We find them almost untouched in their trajectory for distances over which we could not follow their parallels abroad. No great system of road-making of a similar kind, in broad and direct lines, nor any over-laying of them by later work (at any rate, upon any

considerable scale), has obliterated or confused the record.

Apart from this cause, which preserved the Roman roads in their original alignment, other causes are present.

The local autonomy characteristic of the Middle Ages which in most other countries merged at last, with the Renaissance, into a few strong and centralised states, did not so merge in England. On the contrary, after the sixteenth century failure to establish strong central government in England, the self-governing villages were largely transformed into the separate properties of individual landlords. This great social transformation, which England owes in the main to her change of religion at the Reformation, had effects political and social, which various men, according to their temper, praise or deplore. For the purposes of our inquiry in this book, it had one capital effect, which was the preservation of ancient ways and of such ancient monuments as the form of the soil retains. For a great landlord will preserve such things where a peasantry would destroy them; and this is particularly true of a landed class whose wealth is increasingly

derived from sources other than the land, and which can afford to treat its estates as curiosities.

Yet another cause which has preserved the Roman road in England—a cause also attached to the survival, in name at least, of quaint local institutions—is the way in which the modern metalled roads were constructed here.

Upon the Continent, and especially in Gaul, a new road is, and has been now for some generations, a special undertaking of organised government, specially engineered, at vast expense. Not so in England. In England our road system has not been planned. It has developed in the main by the gradual hardening and metalling and improving of the old green lanes: hence the peculiar narrowness and tortuousness of the English road system as we have it to-day.

Incidentally, this slow and natural development of a system which is peculiar to this island, has largely helped to preserve the Roman roads. Where these roads had fallen to the state of green lanes over which traffic was still customary and the right of way upon which had never been lost, the

metalling of the same restored to the eye the aspect of the old Roman military way.

We shall see later on in this book, how, in the early part of the nineteenth century, the Stane Street was thus metalled northward from Slinfold to Alfoldean Bridge. In that public work, which the Duke of Norfolk of the day undertook, the Roman road reappeared. The old Roman crossing over the river was restored and the antique line was fixed for the modern eye. But (to take a parallel instance from the Continent) when a modern road was driven from Amiens to Boulogne, the French engineers made no use of the made Roman line. It is nowhere, in all its length, a principal highway, and the road which we now use follows the Valley of the Somme. One may say of the Roman roads in Gaul, that where they have not been kept in continuous use, they have been replaced and therefore ousted by modern lines as straight and strict as they; whereas, in Britain, disconnected stretches of the same are preserved by our habit of metalling the old lanes.

There must be noted in this connection, a feature of the Roman roads of Britain which has presented a problem to the antiquarian,

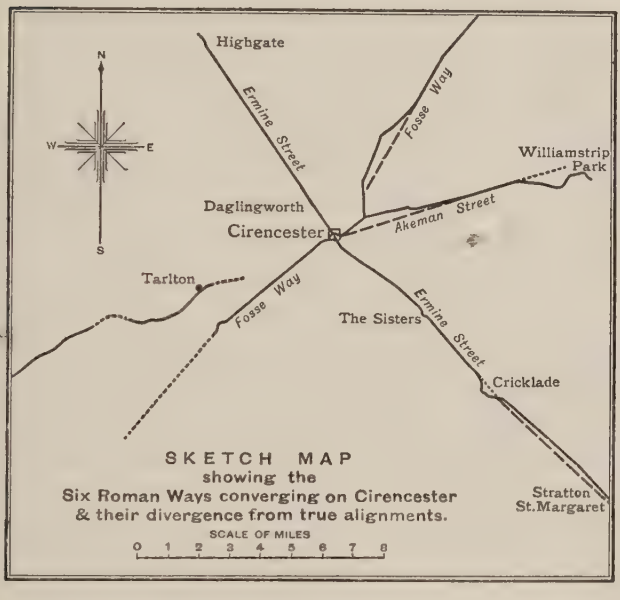
and has not always been accurately explained. The dead straight line normal to a Roman road is, in this country, frequently, or rather generally, modified. We note, as we follow the track of an English Roman way, perpetual slight divergences from the strict line. Almost any section of Roman roads taken at random will suffice for an example of this: I will choose for mine the roads converging upon Cirencester.

The reader who shall follow this scheme of roads[1] may see *five* main roads converging on the town, and traces of a sixth:—the two branches of an "Ermine" Street, the two branches of the Fosse Way, and the Akeman Street, with traces of a road from the south-west, approaching Cirencester from the direction of Tetbury.

Now, in all these there is not one clear piece of alignment, save that limb of the "Ermine" Street, somewhat over four miles long, which runs from the cross-roads near Daglingworth up to the summit of Highgate.

[1] It is most conveniently grasped on the 2-in. Ordnance Map, Mounted and Coloured Series, Cirencester, sheet 70, 1903, corresponding to the four sheets, 234, 235, 251, 252 of the 1-in. 1893–1896 survey.

The southern branch of the "Ermine" Street from Cricklade is badly deflected in the neighbourhood of the Sisters' Inn. Over beyond Thames it forms, not a straight line,



but the arc of a large curve ending at Stratton St. Margaret, and south of that again it is subjected to perpetual small deflections.

The Akeman Street is aligned, pointing at Cirencester from Williamstrip Park (though

it wobbles badly as it approaches the town). But east of that park it makes no pretence of being a straight line, and winds conveniently to the terrain, both before and after the crossing of the river Leach. The Fosse Way has not one strict alignment unbroken by such bends. It is not a straight line, but a sweep southward of North Leach, with an uncertainty at the Fosse Bridge. Beyond Cirencester to the south-west its alignment is doubtful during all the part near Tetbury. Indeed, between the Avon and a point $1\frac{1}{2}$ mile to the north-east of that stream, it is sinuous.

If we consider the other road, of which traces only exist, and which can be followed through eastward and northward, it is no straighter than any one of our lanes. Indeed, it is in many of its parts a modern lane, with no strictness of alignment apparent.

This examination could be paralleled from almost any similar converging-point of Roman roads in England, and it demands an explanation.[1]

[1] Let the reader consider, for instance, out of one hundred instances, the way that can be traced from Dorchester upon the Thames, northward to Alchester and the neighbourhood of Bicester. It is hardly anywhere directly aligned, and it

This character of irregularity in the Roman roads of Britain, which often differentiates them from those of the Continent, is the effect of two widely separate causes.

First: Encroachment upon the public way has been easier in Britain than in any other province of Europe, because the local power of propertied men has been nearly continuously stronger in Britain than the general power of the central Government. A certain amount of encroachment is discovered upon all the old roads throughout Western Europe, but it is a commoner feature in this country than elsewhere, and we owe to it the irregularity of the line of our Roman roads, especially in the neighbourhood of buildings. This must not be confused with considered and originally designed divergences from the alignment, followed by a recovery of the alignment further on. Divergence of a Roman road in this fashion, of set purpose as it were, and on a considerable scale, we shall find to be ascribable to other causes; such as the springing up of a community near the road, the way to and from which replaces the road

is positively sinuous from Beckley to its passage between Cowley and Horsepath.

over a certain section; the choice of an easy crossing for a river; the necessity of taking a steep hill at an easy gradient, &c., &c.

Secondly: The imperfection in alignment, the occasional sinuosities, and the erratic short curves in our British Roman roads are also, and more largely, due to the fact that in Britain, the remotest of their provinces, the Romans did not occupy as thoroughly nor engineer their ways at such an expense, or so completely as in other portions of the Empire. They were therefore often content to avail themselves of existing tracks.

Let me not be misunderstood; the repeated view that Britain was a sparsely inhabited and only partially Romanised province, is one which no one with a care for historical truth will to-day maintain. It arose in that hypothetical and North German school of history which prefers to accumulate facts rather than to co-ordinate evidence; which delights to give guesswork an equal rank with record, and invariably to oppose that guesswork against the tradition of civilisation. The effects of that spirit have been seen and deplored in too many fields, in the analysis of Scripture, in the presentation of the Middle Ages, in the

attack upon the religion and institutions of Europe, for any writer with an appreciation of dignity to lend himself to it. Roman Britain was not a sparsely inhabited nor an ill-civilised province of the Empire. The population of Roman Britain was considerable, its wealth was great; its produce and its armed force alike of consequence. But there is no doubt that, with the exception of the Great Wall, Rome did not invest in Britain that accumulation of energy which is to be found in Spain, or in most parts of Gaul. The local languages, Teutonic and Celtic, seem to have survived with an universal vigour where, upon the Continent, they retired to the heaths of Brittany, to the marshes of the Netherlands, and to within a day or two's march of the Rhine; and this lessening of *potential* in the Roman effort here we may ascribe to the severance of the sea.

It seems certain, then, that in the matter of roads the Imperial power in Britain continually availed itself of pre-existing tracks which were straightened and hardened for the purposes of making a Roman and military way. In sections only were they replanned and thoroughly engineered.

We shall see that the Stane Street in particular is an exception to this general rule. Part of the great interest attaching to it lies in the fact that it was evidently engineered in every yard of it; deliberately planned for a particular Imperial purpose, and unconnected (save possibly at river crossings) with the barbaric ways which Roman civilisation found on reaching the island.

In the course of any inquiry upon a Roman road, the reader will be puzzled to note the survival and the loss of them. This is because the destruction of some portions, coupled with the preservation of others, depends upon social forces spread over so great a length of time that the result appears almost like one of caprice. Roughly speaking, the Roman roads were used, as we have seen, until the twelfth century—but evidently not all of them; nor even the whole length of the principal ones. The bridges of some, where they crossed the chief rivers, had disappeared, others had already failed in the morasses: the use of the road, once broken at several points, and each section left to its own chance of survival, each such section would further tend to disuse at either end: it would "lead nowhere" and be

of continuous service only within its particular neighbourhood. Hard metalling could no longer reach it from a distance. It only needs to break one such long line in two or three small points specially costly to maintain, and at once great sections of the rest will begin to disappear.

Since the revival of Europe and its arts—since, that is, the spring of the Middle Ages, in the twelfth century, the following causes have led to the decay of portions of all the Roman roads, and of some of those roads in their entirety:—

(1) The hardening of the more devious tracks which led from one new village to another off the road. Of such "loop lines," first rivalling and later supplanting the main line, the map of Europe is full.

(2) The cost of upkeep of the roads where they were expensively engineered: this is particularly the case in mountainous districts, over morasses, and where the road had to make use of great bridges. But it does *not* apply to cuttings, which, though expensive to make, are not expensive to keep up, but maintain themselves.

(3) The new political relations of one centre

with another. For instance, Windsor as a place of Government was a direct creation of the Conqueror's and it needed a road to London; only part of the way was served by the old Roman road to Staines.

(4) The growth of forests :—

A piece of woodland, when once it had arisen, was carefully preserved in the Middle Ages for the following reasons :—*First*, that it was a permanent source of revenue. The Middle Ages burnt nothing but wood, which was also their main material of domestic construction. It was at the same time very costly to transport. Further, wood was the pasture of the herds of swine. *Secondly*, a given unit of wealth production, once established, always tended to crystallise in the Middle Ages on account of the manorial system. Custom preserved it. It was difficult in the face of manorial custom to destroy a wood once established, to which must be added: *Thirdly*, the strict feudal interpretation of "waste." The most immediately realisable capital in the hands of the spendthrift or the fraudulent guardian, was the timber upon an estate. For that very reason both public opinion and the law were particularly strict in repressing

the cutting of timber save in regular annual rotation.

Finally, of course, one must note the opportunities for hunting which a wood afforded.

Many of the gaps in the Roman roads are due to a wood having grown up upon some poor soil during the Dark Ages, coupled with the impossibility of felling it in the succeeding centuries (in spite of their increasing wealth) from the causes I have mentioned.

We have an example of this on the Stane Street itself, in the Nore Wood. This wood covers a couple of miles, through which the road has fallen utterly out of use even for the simplest local purposes. Very old trees are to be found growing upon the Way itself throughout this stretch.

To this interruption of the roads by woods overgrowing them must be added the tendency of existing forests, through which the old roads were cut, to encroach upon the ways.

By the time the woods which arose in the Dark Ages began to be cleared again in modern times the use of the road that once led through them had disappeared.

(5) Many of the great ways appear to have been mainly strategic. When their

strategic purpose disappeared, their continuous use throughout their whole length disappeared also.

The Stane Street is an excellent example of this. Great stretches of it were always in use throughout the isolated kingdom of Sussex, but from the sixth century until at least the twelfth, no occasion occurred for organised military communication between Chichester and London, so the part about the county border between the upper Arun and Ockley fell into desuetude. The same is true of the great line from Bavai to Utrecht. It was a necessary thing when Rome was perpetually replenishing her garrisons upon the boundaries of the Empire. When this marching ceased, men had little occasion to travel along the whole length of the way. They used it from one neighbouring town to another; but where there was a gap in their commercial or military necessities, there a gap would come upon the use of the road.[1]

[1] It is this which accounts for the loss of one of the greatest Roman roads: that which led from the Paris district across the Somme at Voyennes to the Frankish district of the north and east. The last army to use the river passage engineered by this road (then in ruins) was that of Henry V. before Agincourt.

CATHEDRAL AND CROSS, CHICHESTER

(6) A number of quite modern causes must be enumerated as having had a considerable effect upon the fate of the Roman roads. First, the paving or metalling of certain new main ways other than, and alternative to, the Roman roads. Once this was done, there was hardly any choice. Travel would always follow the hard way, and where the Roman road was neglected by the modern improvement it became neglected by all travellers. It was no longer used as an alternative.[1]

Again, the growth of new and modern towns, due to changes in commerce, unmake sections of a Roman road. The growth of Lille, for instance, has helped to obliterate the scheme of Roman roads in its neighbourhood. Lille has become the centre of a road system of its own, and many as were the Roman roads in its neighbourhood, most of them only survive in sections as local bye-ways.

The same is true of the change in the nature of a stronghold. Steep, isolated hills,

[1] The main Brussels road from Paris is an example of this—only when it uses the section of a Roman road has that road survived. Thus it is preserved east and west of Bavai, but lost between Nimy and Jemappes.

such as the Hill of Cassel, in Flanders, play no leading part in fortification after the seventeenth century. The half-dozen capital Roman roads which all concentrate like spokes of a wheel on Cassel are therefore now all of them interrupted; in more than half their length they are abandoned, and only one of them is more than a country lane, even in the parts where it is in use.

Finally, the development of railways has of course very considerably affected the old lines of travel. For instance, the shortest way from Rheims into the Barrois was, until the middle of the nineteenth century, by the Roman road across the plain of Chalons.[1] This road left Chalons itself considerably to the west; it afforded but bad going, with doubtful water, and in places deep clay; but it was the direct road from the ecclesiastical capital to the Rhine, and traffic followed it. Since the building of the railway great stretches of it have fallen into desuetude, for no one has occasion to walk

[1] It is characteristic of the uses of a Roman road that Attila used this way in his retreat. His great camp or "ring" is still to be seen alongside of the road, one of the most enormous things in Europe.

the whole of that way, and heavy goods go by rail. Those parts of it which are still in use are mainly kept up by the army marching to the Camp of Chalons from the eastern frontiers of France.

With all this there are gaps without number in the system of Roman roads in Western Europe which we cannot explain because we know nothing of the local social accidents which determined them. They occur in the oddest places, where we can least guess at their causes: on open downs, over hard rock, even on ledges of hillside where the track should be imperishable. They vary in length from a few yards to a hundred miles and more.[1] But these are the main causes which

[1] Too long a list would be tedious: but here are a few cases taken at random that occur to me. Why should the great road from Winchester to Portsmouth Harbour be lost suddenly at Nations Farm, near Bishop's Waltham? The land is the same in the kept part and the lost. Why does the Ackling Dyke choose to disappear on the high land south of the Ebble, just where it should best survive? Why does the great road out of Salisbury to the Bristol Channel leave no trace on the chalk west of the Ridge Wood, just where it had the best opportunity for remaining untouched? Most strange of all, why does *the* most famous stretch of all Roman roads in the Dark Ages, the artery between Soissons and Noyon that was the short main highway of the Frankish monarchy, wholly perish, *not* at

the reader must bear in mind when we come to analyse the particular case of the Stane Street, though we shall find in that case too one gap, and that by far the most important, the causes of which it is impossible to establish.

When we have appreciated the importance of research into the scheme of Roman roads in this country, and further appreciated the causes which have made for the preservation of our evidence with regard to them and for the loss of certain sections, we must lastly grasp some general idea of the strategic and political scheme upon which they depended in this island before we can turn to the peculiar character of the Stane Street.

The Roman roads of Britain combined two services: they provided communications for

the marshy crossing of the Oise—where it ought to be lost—but on the hill of Choisy beyond, and thence almost all the way to Soissons? Why does the main road from Rheims to Treves go right and clear to the Aisne and then amuse itself by disappearing for over a hundred miles? Why does the great way from the South to Norwich faint just *before* that great camp at Caistor where one would most look for it? It is examples of this kind which make the gap in the Stane Street between Epsom and Merton, which we shall later examine, less improbable than it looks. See further note B at the end of this book.

the frontier defences, and they linked up the towns upon whose municipal system the whole scheme of Imperial civilisation depended.

For the purposes of this little monograph, the roads feeding the northern frontier may be neglected.

In the south of England the Roman roads linked chains of existing towns one with another; they had therefore a purpose commercial and civil as well as military, and were not called into being by purely strategic considerations; nor were they the single work of military engineering with its direct purpose and simplicity of action. In other words, the roads of the south were not planned to feed with troops and with the munitions of war some centre that was a depot and nothing else. For, whatever we may conjecture the origin of certain Roman towns in Southern England to have been, we know that all soon became places of civil importance and that none remained mere strongholds.

Now as, for civil purposes, a road will establish itself by custom without too exact a plan, and as the greater part of our centres

of population in South England must surely be pre-Roman in their origin, we can understand that the roads leading from one to the other would bear traces of that origin as well; and when, South Britain being the more fertile and inhabitable part of the island, we note the great number of towns which it contained, it will be apparent that the construction of no one of these roads (save in the particular case of the Stane Street, which we are about to examine) required a special feat of military engineering.

From the 52nd parallel to the south of the Isle of Wight, and from longitude 3° west to the extremity of Kent, is a district contained within an oblong not 100 miles by 200.

In that little space we have at least twenty-six Roman towns whose names and sites we can be certain of, and the longest stretch with which a road has to deal between any two of them—such a stretch, for instance, as the run from Bath to Cirencester, or from Gloucester to Caerleon passes through places which we may justly conceive to have been of their nature inhabited from the most ancient times. If we note one of the largest stretches, the fifty miles and more from London to Sil-

chester, nowhere in that stretch do we find a day's march passing through land probably deserted in early times.

But to this rule the Stane Street is the one exception: and it is this peculiar character in the Sussex road which gives it its special interest. The Stane Street bears

Fig. 1.

throughout its whole course the mark of being specially designed to unite London for military purposes alone, and by the shortest route, with the south-west and the Great Haven, the second entry into Britain from oversea, the alternative route to the Kentish one in the military connection from Rome through London to the frontier.

To proceed from the sheltered water within the Isle of Wight, and notably from Portsmouth Harbour, to London, the way that led from inhabited site to inhabited site was the way round by Winchester. But the short way was the way through Chichester, and that way gave the further alternative advantage of tapping any of the creeks and sheltered tidal waters between Southampton water and Selsey.

But—and this must especially be noted—no track leading from inhabited site to inhabited site, and therefore naturally existing before the advent of civilised engineering, could have lain along the direct line from Chichester to London: no stretch of good, well-watered land corresponds with this north-to-south line.

A belt of good soil and water running *east and west* formed the plain in which Chichester stood. A narrower belt, isolated from the first by a barren belt of the Downs, ran just to the north of these hills, *also east and west.*

Then came a barrier: it was formed by the great district of clay, marsh, thickets and brackish water, which, under primitive con-

ditions, or indeed under any conditions save those of a very active civilisation, must remain but sparsely inhabited or cultivated; to this district the Romans gave the name of the Anderidan wood, a name presumably

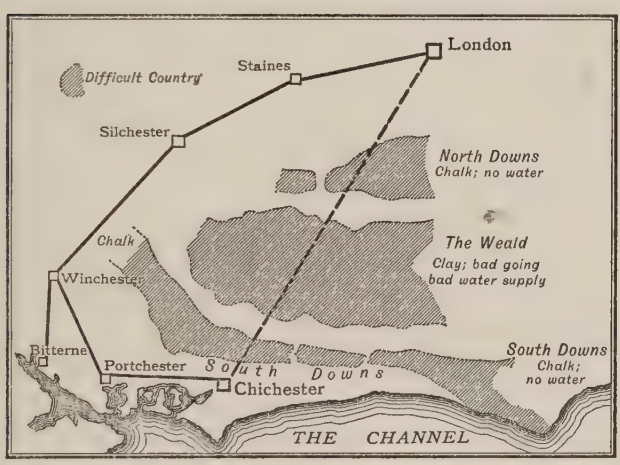


FIG. 2.

much older than their rule, and which we still call by the Saxon name of the Weald. This barrier also ran *east and west*, and it is to be observed that its width forms an obstacle much more than a day's march across. It was this width of the badly-watered, badly-soiled clay which made the weald the barrier

it was; and though another narrow belt of early inhabited land lay (*east and west again*) just under the North Downs, the direct route to London immediately after this would pass through mile after mile of uncultivatable high chalk country, waterless save for deep wells.

The whole scheme of the direct route between the harbours and London forbade it to follow any line of habitation and supply: it cut across three belts of the sort, but they were narrow; it had to negotiate three belts quite inhospitable—and they were broad, the central and most inhospitable very broad, a day-and-a-half's going.

In general, therefore, we may conclude that no continuous and largely used native track suitable for considerable numbers on the march can have existed before the Romans from the harbours upon the confines of Hampshire and Sussex to the great town upon the Thames. When civilised men needed to march an army back and forth between these points in the most direct manner, that need could only be supplied by the carefully-thought-out work of engineers, who had the implements of civilised men

behind them. Such men were the first to cross the weald with a great road, and they stamped upon their work the military motive which determined it.

We turn, therefore, to the particular study of the Stane Street with the knowledge that we are approaching an exception to the general scheme of Roman roads in South Britain and one of the two great military works which the Empire created in this island.

PART II

THE PARTICULAR CASE OF THE STANE STREET

PART II

THE PARTICULAR CASE OF THE STANE STREET

We have just seen that the Stane Street presents an exception to the other Roman roads of Britain, and it is this exceptional character which provides our chief interest in the recovery and study of its course: that alone of the roads it seems to have been engineered at one time and with one purpose by the officials of the Roman Empire, without regard to any older British track, save possibly in its choice of river crossings. These it may have chosen upon the basis of an early barbaric experience. No other road in Britain is so completely designed for the sole use of the army.

It is, again, the only one of the Roman roads upon which we can place no Roman town or village of importance: from Chichester

to London, from its southern to its northern terminus, no such site is found.

This point is evidently dependent upon its artificial and purely military character, since the absence of inhabited sites upon it is due to the fact that the Stane Street did not link up existing communities, nor serve as a general means of communication between a line of markets or producing centres, but linked up only a great depot with the sea communications of the enemy, and that over land where deserts demanded a particular effort of military engineering. It is probable, as we shall see, that one community (Dorking) sprang up upon its course, and it is possible that another site (Pulborough) may be referred by its name to the barbaric period before the coming of Roman armies. But there was no chain of frequent town, village, and settlement, such as is to be discovered strung along the other Roman roads of the south. In their place set camps mark the stations of a marching road.

This original motive in the construction of the road determines its general characters, which must be described before we examine in detail the trajectory of the Stane Street.

These characters are, in their order :—

First: The establishment of its termini, the southern one at Chichester, the northern at London, and what may be called "the *Line of the Road.*"

Secondly: The *alignments*—that is, the method by which the Stane Street was plotted out, and its arrangement upon four great limbs or sections, each of which can be directly proved to have been planned from one point to another upon a straight line.

Thirdly: The military character of the road, which is especially established by its camps or halting-places at the end of each day's march : the *Mansiones.*

Fourthly: The *historical* character of the road, its probable or possible date and continuity in use : to which must be added—

Fifthly: The *divergence* of modern roads from this ancient way and their connection with it—that is, the *partial loss* of the Stane Street : a discussion which will involve an examination of the geological formations over which the Stane Street runs.

I

THE LINE OF THE ROAD

The Stane Street starts from the East Gate of Chichester and is designed with the object of reaching by the shortest road (compatible with the overcoming of natural obstacles) the southern end of London Bridge. The exact distance from one point to the other in a straight line is 55 miles and 3 furlongs.

The choice that was made of Chichester for a starting-point is easily explicable. It was the first town lying in the east of the group of harbours at the mouth of Southampton Water. All these creeks have afforded excellent shelter in the past. Bosham was a considerable point of departure to and from the Continent well into the Middle Ages, and Chichester Harbour itself was in such use until the last century as to merit the building of that canal (uniting it with the Arun and serving the town upon the way) which Turner has made famous.

Chichester, then, was the obvious starting-point, the necessary depot and base for any advance across the Downs and the Weald. But the exact point in connection with London at which the road was aimed, requires more discussion.

An examination of the old roads which seem to have served the neighbourhood of London has led our latest school of antiquaries to the opinion that the crossing of the river was long effected by two ferries, one crossing to Westminster, over the site of the present Houses of Parliament, the other crossing about midway between London Bridge and the Tower, and a little nearer the latter.

With the first of these crossings we are not concerned; but the second is important to us, because it might establish an alternative northern terminus to the Stane Street.

I shall conclude that the Stane Street pointed, not to this conjectural early ferry, but to old London Bridge.

It is possible to determine the point by taking the last visible alignment of the Stane Street near Epsom Racecourse; that alignment points directly at London

the Stane Street by a slight angle and struck above London : there would be no difficulty in bridging the river at Richmond. In a word, but for a bridge at London and the serving of that bridge by a road, the Stane Street need never have been built ; but for a bridge at London, the natural way for military purposes would have been through Staines, or, when it was desired to establish a shorter communication between the south-western harbours and London, some bridge upriver closer to the town.

In the midst of so much that is conjectural, the reader may well ask what positive proof we have for the existence of a bridge at this point in Roman times ?

We have no positive proof. That is, no material remains have been discovered which are at once certainly the foundations or piles of a bridge, and also certainly of Roman origin. Nor is there any direct contemporary documentary evidence to tell us that a bridge was there.

In the absence of these two forms of evidence, we must repose upon conjecture ; but there is a common sense in history, although it is so rarely used : we know that

a bridge spanned the river at this spot in the Dark Ages, and the Dark Ages produced no such origins of their own. We know that Roman London was among the largest of the Roman towns of the West; we know that one great approach to the river from the Southwark side was along this line, for there is a series of buildings and roadside burials (as we shall see in a later section) to prove it.[1]

The conclusion, which no sane critic can refuse, that a Roman bridge did cross the river here, is not based, however, upon such evidence taken alone. It is based first upon a conception of what the Roman civilisation was, and next upon a very simple mechanical consideration.

As to the first: The Roman civilisation is the foundation of all Europe. It suffered and was degraded during the Dark Ages, it was transformed in the Middle Ages; much of its framework has reappeared in our own time, for at the Renaissance it re-arose. Those

[1] See also the *Victoria County History: London*, vol. i. pp. 109–110. Note the finds of 1756, 1824, and succeeding years (when the new bridge was building) of 1846, &c.

who can imagine that the Dark Ages would have produced a great and necessary work like the Bridge of London, and who can imagine at the same time that Rome would have neglected it, are incapable of judging the history of Europe. To anyone with a sense of that history, the assertion would seem as absurd as the assertion that some tattered fragment of a great picture found in the hand of a child was the creation of that child, or that a lost poem of Catullus written in a hand of the ninth century was a poetical product of the ninth century.

But if this type of argument seems out of place in scientific theory, its mechanical counterpart suffices to clinch the matter.

This second or mechanical argument for a Roman Bridge is as follows :—

A very strong tide sweeps the Thames at London. Any form of ferry would have involved a trajectory of a most uncertain kind. A ford—if there was one—could only have been used just at the few minutes of slack water and only at the lowest point of the tide—once in twelve hours. Nor could anyone who believes that a ford was used for commerce or under the ordinary conditions

of the life of so great a town, have himself gone through the experience of fording a deep and rapid stream.

But to return to the ferry: a ferry, I say, must necessarily have had a most various trajectory: the boats pulling far upstream westward in the ebb, far downstream eastward in the flood; often missing the stage, always uncertain, and free from any one line. Coins and objects dropped from the boats of such a ferry would have been found scattered indifferently over a wide belt up and down the stream. They have been found, as a fact, upon one definite line. The loss or abandonment of material along one line, that line the line of the historic bridge of the Dark and Middle Ages, that line a narrow one and a strict one reaching from shore to shore —conclusively proves in a material manner the Roman or Pre-Roman origin of the work.

The Stane Street, then, was, we may make certain, designed to run from the East Gate of Chichester to the south end of that Roman bridge of London which stood just where the mediæval bridge of which it was the parent also stood, and which lay some 50 yards downriver from the modern bridge.

Two such termini being established for a Roman road, if there were no considerable centre of habitation or stronghold to be visited in between, it was in the Roman plan to connect the two by a line as straight as possible.

As a fact, the Roman road from Chichester to London does not follow this dead straight line from point to point. Such a line would take it through Petworth Park (cutting the great pond there through its middle), and so going up through Abinger in Surrey (leaving Leith Hill well to the east); it would cut through the heart of Epsom just at the cross-roads in the middle of that town.

The road does not do this, and the reason it does not is that the Roman engineers had to consider two obstacles in their way: hills and water, and to pass these with the least expense while still serving as fully as possible the purpose of their task, which was to reach London from Chichester by the shortest trajectory.

In order to surmount the hills and to cross the rivers most easily—subject to such a purpose—the road was planned, not in one perfectly straight line, but a broken one consisting of four great straight sections whose

total length amounts to just over a mile and a half more than the absolute straight line —56 miles and $7\frac{1}{2}$ furlongs, in place of 55 miles and 3 furlongs. At so slight an expense was secured an easy passage both of the North and of the South Downs and proper crossings of the rivers Arun and Mole.

This length was increased (by sundry slight divergences, which will be dealt with later) to a total distance of 57 miles and 1 furlong, which is the complete mileage of the road from terminus to terminus.

The straight line from the East Gate of Chichester to the southern end of London Bridge lies at an angle to the meridian 30° 25′ East of North, but the Stane Street starts out from Chichester for its first section (which terminates at Pulborough Bridge and is somewhat over 14 miles in length) at an angle 52° 45′ East of the meridian.

The second limb from Pulborough Bridge to Leith Hill bends round towards the original line and runs but 22° 30′ East of the meridian. It is $17\frac{1}{2}$ miles in length.[1]

[1] This second limb is slightly broken at its origin, as is shown upon the appended sketch map. The reason of this will appear later upon pp. 96, 97.

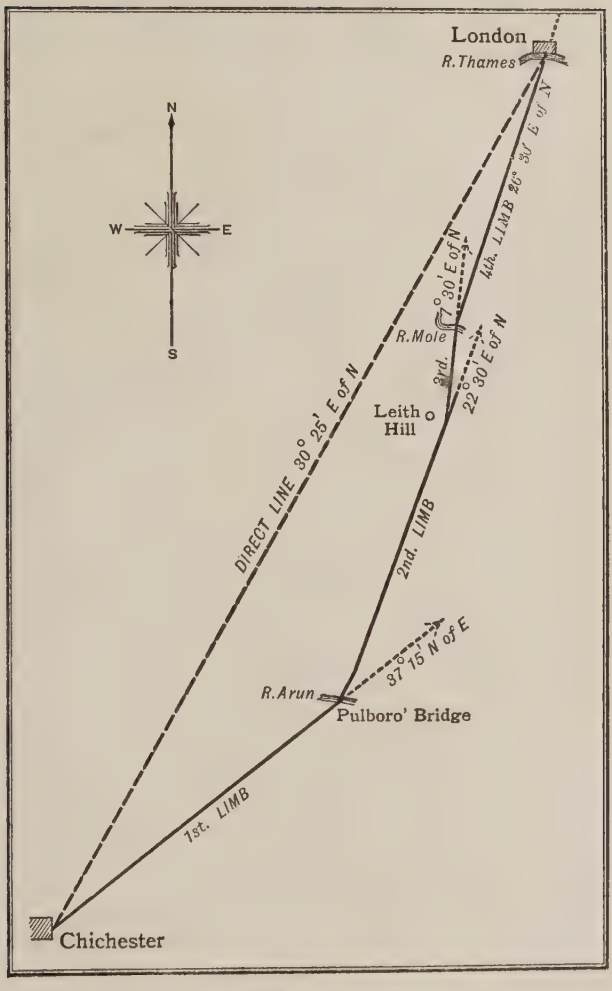

London
R. Thames
N
W
E
S
4th. LIMB 26° 30' E of N
3rd. 17° 30' E of N
R. Mole
22° 30' E of N
Leith Hill
DIRECT LINE 30° 25' E of N
2nd. LIMB
37° 15' N of E
R. Arun
Pulboro' Bridge
1st. LIMB
Chichester

FIG. 3.

The third limb, from Leith Hill to the crossing of Juniper Hill,[1] is a short one of $6\frac{3}{4}$ miles, designed to negotiate Dorking Gap and to avoid the steep edge of Box Hill; while the fourth limb, not quite 19 miles in length and running from the shoulder of the Box Hill group to the Thames, begins to be straight from a point in Mickleham Downs, is aligned backwards towards Juniper Hill and points straight to London Bridge; it is driven at an angle under 28° 15′ East of the meridian, and therefore converges with the ideal straight line from Chichester to London (which it meets at the foot of the Bridge) on a very fine angle.

It has been suggested that the construction of the Stane Street in these four limbs, each at an angle to its neighbours, and the abandonment of the direct line to London, was due to the difficulty which the engineers of the Empire would have found in striking a direct line of such length. A total trajectory of 57 miles, one might imagine (had

[1] If we count from one "sighting point" to another, the end of this third limb is a point on Juniper Hill, making the limb 1 mile and more longer: but the point of flexion of the actual road is below this.

one no parallel instances to guide one), was of a magnitude that could hardly have been guaranteed against deflection.

The method by which the Roman engineers presumably plotted out the strict direction of their great highways will be dealt with later; and it will be seen that this method, though capable of perfect accuracy over such a stretch of country as might be commanded in one great view from a particular height, would possibly tend to inaccuracy over a distance involving several such views. On this account, the suggestion has been made that the Roman engineers in plotting out the Stane Street could not trust themselves to one alignment so prolonged; they took a general direction only, and "pieced together" more or less hap-hazard exact alignments drawn from one view-point to another.

But we have examples which convince us to the contrary.

The great Roman roads of the north of France are known to preserve their alignment very nearly over spaces equivalent to this great stretch of country. It is true that in the longest of these stretches, in Normandy and Picardy (to take the provinces where

they may be best observed), some slight deflection is observable, and that the dead straight line is apparently not obtained over a trajectory superior to some 30 miles.[1] But it will be observed in the case of the Stane Street that there has not been even an attempt at such a route. This military way

[1] Thus the great road south-west from Bavai runs straight for 15 miles to Forest; then there is a very slight deflection over the next run of 10 miles. Again, the main road from Amiens to the east runs without a swerve for just over 30 miles, but it has no further task, for at the end of this stretch it joins with the Bavai road. On the other hand, the great road from Amiens south-east is permanently deflected by the hill of Beaucourt, the deflection amounting to nearly 2°, and occurring less than 13 miles from the city. The road north-eastward from Bavai, whose ultimate terminus is Aix-la-Chapelle, does not run more than 29 miles without a turn, but the turn here, though slight, is so noticeable that it was probably intended. The great road driven from Paris to Rouen is a better example still, for here we have an alignment from St. Gervais to Ecouis which points directly at the town of Rouen and falls within its Roman walls, and which yet suffers a slight divergence after the sixteenth mile, a divergence which has to be corrected after the river Andelle is crossed. In general, the attempts of the Roman engineers to drive an absolutely straight line over a stretch of country greater than was commanded by one view, is never perfectly successful, but, on the other hand, is always near enough to success to make the angles of deflection very slight, and never so far from success as to account for great breaks of 7° and 19°, such as we have in the Stane Street.

is deliberately planned in another fashion, and makes first for Pulborough, well off to the east of the direct line ; then at a clear angle of several degrees for the shoulder of Leith Hill, thence at another sharp angle for Burford Bridge and the heights above it, thence at another sharp angle for London Bridge. Had some such attempt been made [1] to drive a road straight from terminus to terminus, we might expect a direction laid first on Petworth, some slight error of alignment perhaps behind Petworth where the view was lost, another caused by the confusion of hills between Leith Hill and the right bank of the Mole, and, in the result, a line nearly but not quite accurately laid would have been obtained.[2] But no such one line has been even attempted.

The rationale of the road's construction is a further evidence in the matter. The

[1] As was made, for example, in the case of the Rouen-Paris road just quoted, which crosses the Oise and several minor rivers and yet attempts a fairly direct trajectory of no less than 80 miles.

[2] That is exactly what we have, for instance, in the great Norman road between Pontoise and Fleury. The general direction is nearly obtained with slight deflections due to the masking of each great view as its boundary height is passed.

straight line can only have been obtained (as we shall see later) by the fixing of marks, high posts, or whatnot, which could be observed at a distance, and the fixing of intermediary posts aligned between the more distant ones. Such a method, the absolute accuracy of which could only be tested over one view, might lend itself to a slight variation where two sections of the alignment joined, but it would in no way account for the bold and deliberate angles made one with another by the limbs of the Stane Street.

Another cause for this lack of a direct alignment from Chichester to London might at first sight be found in the broken nature of the country and the difficulty the engineer would have been under—without compass or theodolite—to estimate what the straight line should be over so considerable a distance. He would have (one might wrongly imagine) to "feel his way" more or less; he might know, for instance, from travel or from the experience of the barbarians, that Pulborough was more or less upon the way and was a common crossing-place of the Arun, that Leith Hill was another landmark "more or less," and that his goal upon the Thames

could be actually discerned upon a clear day from the summit of the Leatherhead Downs, which would be a third landmark.

But a visiting, in good weather, of the view-points in question, proves to one that the Roman engineer—even if we suppose him lacking instruments of precision—was guided by something much more definite than such guesswork. If, for instance, Leith Hill were one of a mere series of popular landmarks on the straight line to London, then he would not have gone round by Pulborough to reach it.

One has but to stand upon the summit of the Downs at Gumber, where the Stane Street crosses them, to see without the aid of any instrument that the straight line from Chichester to Leith Hill, both of which are conspicuous from this point, passes far to the westward of one's position.

In general, we must conclude that the line taken by the Stane Street was so taken deliberately, and that the Roman engineer in choosing to break the space between Chichester and Dorking Gap into two distinct limbs, set at an angle of 30° one to the other, and meeting at Pulborough, had some definite purpose in view.

What that purpose was, and how similar purposes governed the formation of the other two "limbs," that which negotiates Dorking Gap and that which drives from Leatherhead Downs on to London Bridge, I will next proceed to inquire.

II

THE ALIGNMENTS

We have seen that the Stane Street is, unlike any other Roman road in Britain, artificially planned throughout its whole length, basing itself upon no pre-existing path; and the proof of this lies in its establishment along four great plotted lines (three running accurately straight, and one[1] broken for a discoverable cause), from one determined point to another.

There are, indeed, very many examples in which *portions* of a British Roman road have been so exactly aligned. I have already quoted on p. 22 that part of the Gloucester-Silchester road which runs to a marked hilltop north-westward from Cirencester. A similar alignment leads directly from the height

[1] That from Pulborough Bridge to Leith Hill. This limb, the second counting northwards, is deflected in its first quarter, as I have already said, and for reasons later to be examined.

above the Noddon at Stanford to the height on which stood Calleva. A third is the dead straight line through Stowe Park and its neighbourhood in Bucks; another that from Stratford, aligned on Plumpark Hill to Towcester; another that stretch of the Fosse Way from Halford to Compton Verney. There is no need to multiply the examples; they are to be discovered up and down the island by the dozen. But in no case does the *whole* road show this character throughout save in the case of the Stane Street. Thus, in the case of the Silchester road just mentioned, there is an uncertain alignment east of the Loddon and a gradual deflection further on at the fords of the Black Water. Upon any Roman road we may choose to take, except the Stane Street, such sinuosities or gradual divergences from the straight are common. We must ascribe them, as I have said, to the advantage taken by Roman engineers in inhabited districts, of existing ways, and to the necessity or temptation they were under, of visiting existing settlements.[1]

[1] The road coming up from Winchester to Silchester is another example of the same thing. It is aligned between Worting and Beaurepaire Farm in the most precise

The Stane Street alone avails itself in no part of its length of older trackways.

From the East Gate of Chichester to Pulborough Bridge one direct alignment has been struck, the accuracy of which is the more remarkable from the fact that it crosses a range of hills between the two points, so that each end of this first limb is hidden from the other.

From Pulborough Bridge, again, to a point on the shoulder of Leith Hill, a second alignment has been struck, one slight divergence

manner; but north of the latter point there is a clear deflection, although a slight one. The Port Way, again, in the same neighbourhood, is an excellent example of direct alignment for miles, and one of the clearest in the island, although there is a very slight deflection due probably to a near "sighting" after the summit of Hannington Hill. But west of Andover as far as Quarley Hill local paths earlier than the Roman occupation appear to have been used, and thus to have interfered with the strict plan, which is not recovered again till a point is reached between Quarley Hill and Sarum.

If I am right in ascribing the lack of a straight road between the two points mentioned, to the use of pre-existing paths, the exception would correspond to the more thickly inhabited country of the Anton Valley. But if local search should establish a straight road in this central section, the whole of the Port Way from Sarum to Silchester would form a parallel case to what I here call the exceptional case of the Stane Street.

in which will be discussed later: it is but an added proof of artificial alignment, and bears no relation to earlier roads.

From the shoulder of Leith Hill, a third line was struck to the height of Juniper Hill above Burford Bridge.

For a space of several miles south of this last point, and for some little way to the north of it, the road is unavoidably deflected from the strictness of its system, by the necessity of turning the very steep flanks of the Box Hill group; but once these are negotiated, from a point at the beginning of the grounds of Cherkley Court, the Stane Street, as I shall hope to show later, is aligned upon a fourth great "limb" absolutely straight which reaches its northern terminus at London Bridge.

The road is sometimes compelled, from the steepness of a bank, or from the presence of marshy soil, to desert its direct line deliberately for some space and to make an "elbow" to one side. But it always recovers the alignment again, and such an arrangement is a further proof of the artificial engineering of the whole of its course and of the absence of reliance upon pre-existing tracks, such as

THE WEALD OF SUSSEX FROM THE SHOULDER OF LEITH HILL

are to be found, I think, upon every other Roman way in the island.

Before examining the course of these "limbs," we must ask how so perfect a series of alignments was effected.

The answer to this can of course be based on nothing but conjecture; but we may confirm our conjecture both by noting certain traditional ways in which an alignment is still taken over long stretches of country, and by a consideration of the limitations under which the Roman engineers presumably worked.

Whether the civilisation of the later Empire possessed instruments which enabled distant observations to be taken, we do not know. But the weight of negative evidence against the existence of such appliances is so strong that everyone has rightly presumed it to be overwhelming.

The vulgar conception that the arts and sciences enjoy a definite progress, and that the civilisation we enjoy has been slowly and regularly evolved through an indefinite past, may be dismissed with the contempt it deserves. An infinity of human instruments, and of human discoveries, an infinity of

technical work in text-books and in material, has disappeared under those successful wreckings of culture which have undoubtedly marked the history of Europe with regularly recurrent disasters from its unknown beginnings to our own time.

It would be ridiculous to assert that precision of measurement, the advantages conferred by the modern telescope, by the vernier, &c., were necessarily unknown in all periods of antiquity. But in making a particular comparison between two particular periods—our own and the first four centuries of the Empire—we have a right to assume our great superiority in the process of surveying.

We know, from their astronomical and geographical speculations, that their observation of angles had nothing of our modern precision; we may presume that no instrument more powerful than the human eye was available for the discerning of distant points.

How, then, was a straight line established by the Roman engineers between two distant points which it was desired to connect by a made way? There is a process—perhaps

the only practical one where telescopic aid and instruments of precision are absent—which can establish such alignments over distances corresponding to one great view, and even capable of linking up in one line two or more such single stretches. This process may be watched in practice to-day upon a smaller or larger scale throughout Europe. It is the process used for the alignment of rides through the great forests by our modern woodmen, and for the laying out of any straight course.

This process is one of "sighting," and in its simplest form is as follows. Of two observers, one takes his station at one of the termini and there sets up a mark to which the alignment is to run from the other terminus. At that other terminus a second observer is stationed and a second mark fixed.

Between the two observers, and at some central point observable by both, a third sets up a third *movable* mark, and shifts it to the right or left as the two observers stationed at either end of the line may signal him, until this stake exactly covers the first terminal mark as seen from the second and the second as seen from the first. In theory, it would

be sufficient to have one observer only at one terminus, watching the moving central mark and signalling to it until it was exactly in line with the other terminus. In practice, it is more accurate to have the observations controlled and corrected from either end.

When the central point is settled, the movable mark is there fixed. It becomes in its turn a terminus. Parties proceed to establish in the same fashion other intermediate marks between the centre and each terminus; the shorter sections so formed are again divided by smaller poles observable over the shorter distances; the intervals are staked; and at last a line marked to every few yards is plotted out, and finally corrected by sights taken forward to the one terminus and backward again to the other. It is easy in such a fashion with a sufficient body of men to obtain an exact alignment over distances limited only by the possibility of observing a distant mark, and the absence of any interference of high ground on the line between the two termini.

Thus, in the annexed sketch map, an observer at A marks across the intervening plain, a tall, white pole, set up at B, a

distance such that it can be clearly observed from A. A party working along C D (between either extremity of which line the alignment would obviously pass), shifts another tall, white pole, until the observer at A signals that it is exactly between him and the mark at B. This signal is made when the shifting post is at E, and at that point it is fixed.

This done the process is repeated along

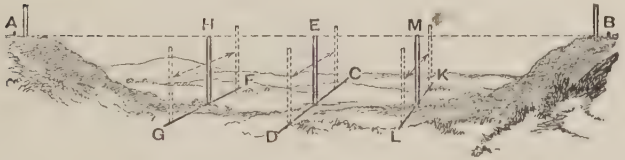


Fig. 4.

the line F G with A and E as terminals, and a new fixed point is established at H. Then along the line K L with E and B as terminals till a new point is established at M, and so forth. A few main points so established, the alignment is finally marked at short distances by a row of stakes along the line A B.

This elementary process of alignment presupposes two heights overlooking a plain. In practice, of course, short sections of the

trajectory are hidden from their neighbours by the irregularities of the soil. There may even be such high ground between the two termini as completely to shut off the sight of one from the other; the element of complexity thus introduced is resolved as follows:

Let A in the annexed sketch, be one terminus of the alignment, and B the other, while a height the crest of which is marked by the letters F G intervenes between them.

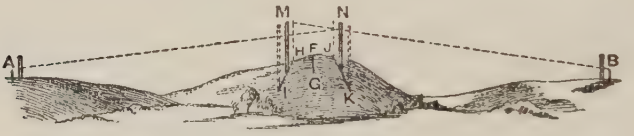


Fig. 5.

Upon this crest two poles are raised, the one moving along H I, the other along J K. An observer accompanying the party which is moving the first pole, manœuvres until he has the second pole in line with B. Meanwhile, it is the business of the observer accompanying the second pole to shift it back and forth until the first pole is in a line between him and A. In theory the two might continue to shift indefinitely and make an indefinite number of errors, but in practice,

since each party is fairly close to the other, and signalling is constant and easy, the double bearings are very promptly arrived at. The first pole is fixed at M and the second at N, so that M covers the mark A as observed from N, and N in its turn covers the mark B as observed from M. The two "sighting" poles and the two termini are then all four upon one line, and the staking out of each branch of the section on either side of the hill can be exactly proceeded with, although each branch is invisible to the other.

If a double height intervene between the one terminus and the other, the process is somewhat more difficult, but proceeds upon the same lines of double alignment by backward and forward sighting. More than two intervening heights will not be discovered, I think, upon any one limb of a Roman road. There will, of course, be many intervening folds of land, but no more than two high points, nor more than *two* great views embraced in any one perfectly straight section of any Imperial military way.

Here a very interesting query suggests itself as to the manner in which these dis-

tant observations were effected by the Roman engineers.

I have spoken of a mark "clearly visible" from a terminus or from a central point between two termini, but the distance over which these long straight lines run are sufficient to make a modern observer of their alignment marvel. Take, for example, such a view as that from the top of Gumber Corner to the East Gate of Chichester. Chichester steeple, a great monument narrow and high, standing on an absolutely level plain, makes a fairly conspicuous mark, but without telescopic aid a mere pole or standard, such as could be easily set up and taken down again, would be certainly invisible. We must postulate the use of a mark of very considerable height, of some width (though tapering to a point for the sake of accuracy), and clearly defined against the sky: a scaffolding of at least 150 feet made to such a shape would not be too great, and we are compelled to the conclusion that these great ways could only be plotted out at a very great expense in establishing many such marks.

An ingenious suggestion has been made in more than one quarter that these great align-

ments were established by smoke signals. I cannot agree with that opinion.

It is true that a column of smoke is seen from a great distance, but it has a fatal defect in the matter of precision. It will require not only a very clear, but what is much rarer a perfectly still day (the coincidence of clarity and stillness is rarer still) to do anything with a smoke signal seen from Gumber as far off as the shoulder of Leith Hill. Moreover, a little experience would teach the defenders of this hypothesis how difficult it is to locate the point upon a distant sky-line whence even a perpendicular column of smoke rises. Now, with a scaffolding of any sort this is not so, and, for some optical reason or other, a *high* scaffolding will be clearly observable on a sky-line where a lower one of similar width escapes the eye.

Again, it would be an infinitely long business to establish fires in place after place halfway between the two termini until one had exactly hit off the medial point. Nor, as this would commonly be much lower-lying than the two terminals, would any column of smoke, save a very tall and perfectly perpendicular one, be of the least use.

Now, these great alignments are exact to a yard for mile after mile, and it is therefore impossible to believe that any rough-and-ready method such as a smoke-signal was sufficient to direct them.

I am compelled, therefore, to the conclusion that movable platforms were used with scaffolding upon them. And these must have been of great magnitude.[1]

Anyone who stands to-day, upon Pulborough Hill, and looks towards Leith Hill, even upon the clearest day, will appreciate how considerable a mark would be required for the unaided eye to fix a terminus there. And we must conclude that these enormous alignments could only be effected by some piece of work of such dimensions as our modern instruments of precision have made us lose the habit of.

The magnitude of the undertaking is increased in our judgment when we consider the necessity of establishing the intermediary points by the use of some *movable* vehicle:

[1] *Mirrors* are a possible suggestion (though only for a segment of the circle), but useless surely without telescopic aid to fix distant reflections. Lights at night would be quite impracticable. I can see no alternative to the engines I have imagined.

a thing on wheels for which some sort of short transverse track must usually have been prepared, and which must have been able to carry an erection clearly visible for a distance of at least 10 miles.

Unless we are to admit the hypothesis of very large works of this kind, we have no alternative but to suppose the plotting out of a more or less satisfactory alignment, which should be brought to exactitude at an expense of perpetually corrected error, ceaseless readjustment, and the efflux of a considerable time. Such methods savour of the "practical," commercial, slipshod races: they are not consonant with the military habit of the Roman mind.

Over a short distance a number of stakes, set at regular intervals apart, a couple of hundred yards or so one from the other, more or less in the direct line, and the exactitude of their direction established by a perpetual correction of backward and forward sighting, would suffice. But to produce such an effect as the plumb between the East Gate of Chichester and Pulborough Bridge, or between Silchester and the crossing of the Anton, or between the passing of the Thames

at Cricklade and the summit of Highgate Hill, by staking in this fashion, is hardly the way such results could have been arrived at.

I have said that these great alignments upon the Stane Street nowhere use old passages or tracks, unless it be at the crossings of rivers; and I have pointed out that the exactitude of these long straight limbs was a sufficient proof of that.

The crossings of the rivers at traditional points is an exception to this rule.

It is true that only under barbarous conditions is a stream, even with swampy banks, a considerable obstacle to travel. Under civilised conditions a causeway can be made almost anywhere; a bridge can be thrown over any stream of tolerable width; and the direction of a main road is more commonly important than the exact point at which it shall cross water. But the rule needs modification. There is, in the first place, the question of cost. The engineer in civilised times will prefer to shorten his causeway as much as possible, in order to avoid expense. Again, an existing settlement upon water and an existing bridge offer him a

temptation to use them: old crossing-places with a firm bank upon either side will have been discovered in barbaric times before the civilised engineer comes into play, and places which save one the crossing of several branches of a divided stream will have been established by usage and will save the construction of several bridges.

We may therefore expect a Roman road sometimes to cross a river at its own choice, sometimes to follow the choice offered it by previous conditions of habitation and travel, and our general rule would seem to be that where the crossing of a stream is the terminus of one long straight "limb" and a point of flexion between one section and the next, there presumably (unless we have strong arguments against it) was a pre-Roman passage of which the Roman engineers made use.

Similarly, where a Roman road leaves its alignment for a short space and makes an "elbow" to negotiate the obstacle of a stream, we may admit the same conclusion; but where its alignment from one distant point to another is undisturbed at the water, we may conclude without hesitation that the

crossing formed part of the road and was as novel as the road itself. This is obviously true, for instance, of the Akeman Street, where it crosses the Windrush at Asthall, and probably true of its crossing of the Evenlode, though not as certainly true of its crossing of the Cherwell.[1]

The original line of the Wiltshire Ermine Way, though it suffers a divergence at the crossing of the Thames,[2] seems to have taken that small river where it chose. The Fosse Way is not deflected by the Coln (though it is by the Yeo). The Northern Ermine Street seems to choose its own ferry over the Humber. The Watling Street in its eastern and its western branch must have passed over long causeways at Stratford as at Stretton, though at the former passage a mile or two's deflection to the right would have saved a good deal of time: and in

[1] In my judgment, Akeman Street negotiates the Cherwell at Kirtlington in a rather tortuous way, and therefore presumably follows there an old British trail. I take it to follow the spur of high land on the west of the stream and to go up aslant of the steep slope upon the east. But I have given no particular study to the place, and I only offer the suggestion.

[2] Indeed one of 9°. From 40° N. of W. to 49° N. of W.

general a Roman road must be presumed to have crossed a river at some passage of its own choosing, unless an earlier crossing is clearly indicated.[1]

Judged by this rule, we may suppose it possible that the crossing at Pulborough was ancient, though there militates against this conjecture the width of the marsh upon the southern side and the suspiciously convenient alignment of Pulborough Bridge with the easy way down Bignor Hill. I will discuss this more fully on a later page.

Similarly, we may be certain that the crossing of the Upper Arun at Alfoldean Bridge is due to the Roman engineers alone, for it comes right upon the exact line which aims from Pulborough Hill to the shoulder of Leith Hill.

The crossing of the Mole, on the other hand, at Burford Bridge, we may still believe to be an aboriginal passage, from the presence of hard land upon either bank, and from that of a "swallow" or lessening of the water (and sometimes its disappearance) at this point, as well as from the fact that crossing

[1] As it is, for instance, at Corbridge and at Ebchester, across the Tyne and the Derwent respectively.

just at that spot necessitates a turn round the flank of the Mickleham Hill a little sharper than would be the case had the Roman engineers thought themselves free to choose any crossing-place at random.

As to the crossing of the Wandle by the Stane Street, if my judgment upon a later page as to Merton be proved correct, it is an example of a Roman road leaving its alignment, and making an "elbow" in order to use an ancient and secure crossing just off its direct line, which it leaves immediately before the crossing and rejoins immediately after.

The crossing of the Thames itself does not enter into this argument, for we must presume the Stane Street to be pointing at an already existing bridge, if we are to explain its direction.

We are now in a position to determine what considerations decided the Roman engineers to plot out the four great "limbs" of the Stane Street in the fashion they did.

A

THE FIRST LIMB. FROM CHICHESTER EAST GATE TO PULBOROUGH BRIDGE

The first limb was set straight from the East Gate of Chichester to Pulborough Bridge; it pointed, therefore, very considerably to the eastward of the direct road to London, which would have taken a line over Goodwood Hill and towards Petworth.

This westward divergence of the first limb is explained by the difficulty of negotiating the steep northern escarpment of the South Downs, coupled with the advantage of crossing the Arun at a point below its junction with the Rother, so that one stream and not two has to be passed. It will be seen that these two advantages coincided in a very exact and curious manner.

If the contours of the South Downs be noted on the accompanying sketch map, it will be seen that there is one place at which the crossing of them by any road driving from Chichester north-eastward to the lower Thames is easiest, and, as we shall see in

a moment, that saddle accurately corresponds with the general alignment from Chichester to Pulborough Bridge.

It so happens that a crossing of the Arun in the neighbourhood of Pulborough had advantages of its own which will be presently described. Those advantages corresponded with the advantage of crossing the Downs at the easiest place, and the drawing of the line of the first limb from the East Gate of Chichester to the site of what is now Pulborough Bridge, afforded a combination of all the most favourable circumstances discoverable for the road. There is no better example in Britain, and perhaps none in Europe, of the science and of the eye for country with which these great ways were designed; and the trajectory of the Stane Street over these obscure fourteen odd miles is a monument to the military genius of Rome.

It will be perceived by the scheme of contour lines upon the map that the South Downs, west of the point where the Stane Street crosses them, bifurcate into two great ranges which are marked upon the map A A B and A A C respectively. The southern one, A A B, leads to Goodwood and

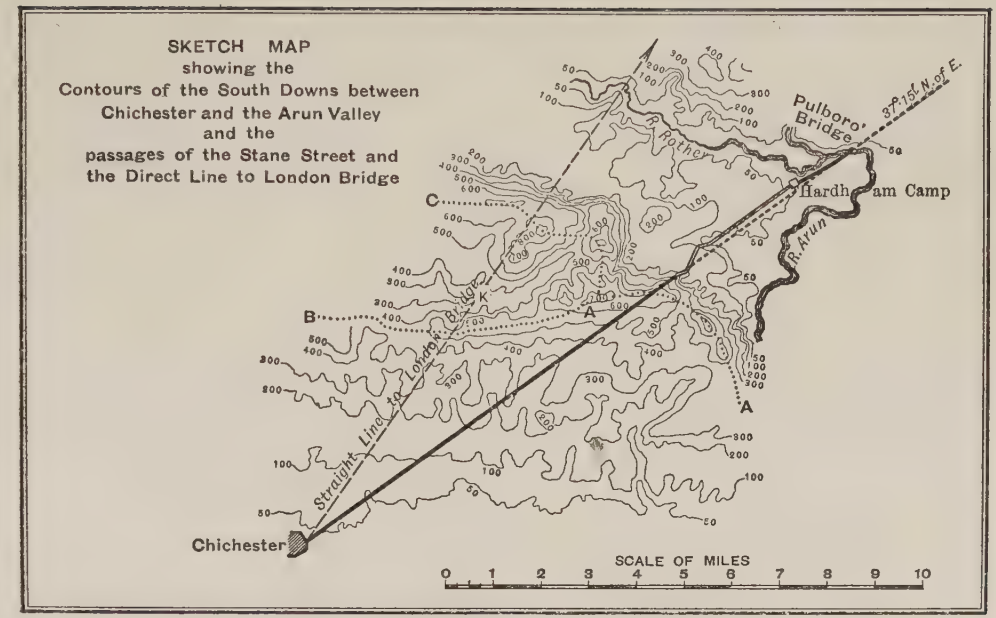

SKETCH MAP
showing the
Contours of the South Downs between
Chichester and the Arun Valley
and the
passages of the Stane Street and
the Direct Line to London Bridge
Pulboro' Bridge
3°P.15'N. of E.
Rother
Hardham Camp
R. Arun
C
B
A
A
K
Straight Line to London Bridge
Chichester
SCALE OF MILES
0 1 2 3 4 5 6 7 8 9 10

FIG. 6.

supports near its extremity the famous race-course. The northern, A A C, which is the main ridge, after taking a sharp bend northwards, runs in its general line a little north of west towards the Hampshire border. It will further be noted from a glance at the contours that the escarpment of this main range towards the Weald and the valley of the Rother is exceedingly steep. There are many places where a man walks down it with difficulty, and many more where he must lead his horse. Any planning of the road, therefore, which would have led it further westward than its actual line, would have been confronted with these two difficulties: first, that the road, instead of having to cross the range where it was single, would have had to make a double crossing. It would have had to surmount the Goodwood ridge, dip into the Waltham-Singleton Valley, rise again steeply to the main ridge, and on the further side and escarpment of that, fall precipitously upon the Weald.

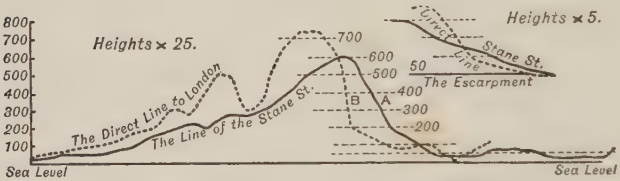
By the line actually taken, the Stane Street, after a very gradual rise from the plain and after surmounting two slight elevations, one above Halnacker the other to the west of

BIGNOR HILL (GUMBER CORNER)
(LOOKING TOWARDS PULBOROUGH)

Eartham, rises, by the most gradual incline traceable in any part of the Downs, to their summit. If the straight dotted arrow drawn on the map from the East Gate of Chichester to Petworth (the direct line for London Bridge) be noted, it will be seen that this line has a steep hill to breast, after travelling barely 3 miles from the city gate. It is compelled to a rapid climb in Goodwood Park up to the 400 feet contour. Another mile takes it well over 500 feet; but so far from having surmounted the Downs, it must drop again suddenly through a steep combe to below 300 feet at K.

This done it must rise again another 400 feet, cross yet another combe, reach a height of over 700 feet just above East Lavington, and there come down by one of the steepest banks in the whole range of the Downs upon the Weald. To what adventures this line would lead it further north I will allude later, but what has just been said is enough to show that the direct line from Chichester to Petworth would have been unpractical in the extreme. On the other hand, the line actually taken exactly utilises the greatest advantage possible. The Downs are crossed

at a height of no more than 665 feet; a gradual and uniform rise leads to this height, covering less than 400 feet in over $2\frac{1}{2}$ miles. On the far side, here as everywhere upon the Downs, the escarpment is precipitous, but a turn in the line of the hills allows the Stane Street to follow the bank sideways and to descend gradually to the Weald; it



Profiles of the Stane St. & the Direct Line respectively, in their passage over the South Downs.

Fig. 7.

meets the contours gradually and upon a slight gradient, instead of meeting them directly, as it would do upon any other alignment. The difference is shown graphically in the accompanying sketch.

Finally, by continuing this line to Pulborough Bridge, it takes at its narrowest the marshy land which at one point or another in the Rother or the Arun valleys or both it would have to negotiate. A little to the

west and both the Arun and the Rother would have had to be crossed where their streams are numerous and meet in very difficult and wet ground. A little further to the east and the road would have been compelled to a long causeway over the marshes that flank the Arun upon either side. The particular line chosen involved the crossing of this marsh, of course, but the crossing of it at a narrow point; and we must conclude that the line thus struck from the East Gate of Chichester to the crossing of the first considerable stream which the Stane Street had to deal with, is the very best its engineers could have chosen. The two obstacles which lay before it, the South Downs and the marshy valley of the Arun, are surmounted in that way, which, when all difficulties are considered, combined the greatest economies of effort.

B

THE LIMB FROM PULBOROUGH BRIDGE TO LEITH HILL

Once at Pulborough, after so considerable an eastward diversion, an attempt had to be

made by the Roman engineers to recover the London line by a turn more westerly.

They had also to cross the northern range of hills which bounded the Weald, and which lay between them and London, in the easiest fashion.

To effect this double purpose, a sight taken to the conspicuous point of Leith Hill, and somewhere on its eastern shoulder, would serve; for Leith Hill is not only the plainest mark northward from the neighbourhood of Pulborough, but also stands at the mouth of the "Dorking Gap," which is sentinelled on its further side by Box Hill.

The road had to find its way between Leith Hill and Box Hill, avoiding as much as possible the steepness of either elevation. The nearest conspicuous point was to be found upon the shoulder of Leith Hill. A direct line could not be drawn so as to pass between these two steep and high hills.

To avoid a climb up the great height of either summit, it was necessary to pass round the eastern shoulder of Leith Hill, and then to pass round the western shoulder of Box Hill, as the contours on the map opposite show.

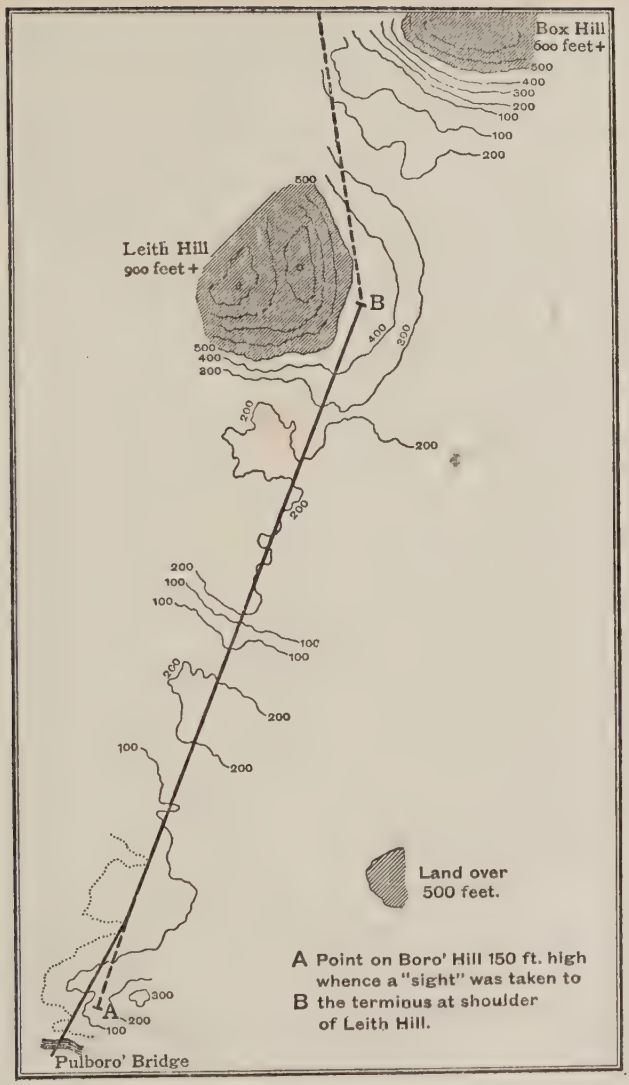

Box Hill
600 feet+
500
400
300
200
100
100
200
Leith Hill
900 feet+
500
B
400
300
500
400
200
200
200
200
200
100
100
100
100
200
200
100
200
Land over
500 feet.
A Point on Boro' Hill 150 ft. high
whence a "sight" was taken to
B the terminus at shoulder
of Leith Hill.
A
300
200
100
Pulboro' Bridge

FIG. 8.

It was of advantage, therefore, to take the direction from the shoulder of Leith Hill, which could be clearly seen from the heights above Pulborough, to cross that shoulder as low down as possible, consistently with the establishment of a good landmark, and once there to take a new sight towards the crossing of the Mole and the passage round the flank of Box Hill.

But in this alignment from Pulborough Bridge to the shoulder of Leith Hill, the Roman engineers were confronted with a difficulty which has perpetuated its memory in the shape the Stane Street has taken along this section. From Pulborough Bridge itself Leith Hill is not visible. Though visible from the ridge height above Pulborough on which the church stands, that height is so inconspicuous, as seen from Leith Hill, that it would have been very difficult to take a sight from one point to the other. The difficulty was got over apparently in the following way.

Not quite a mile on the way north from Pulborough Bridge there will be noticed upon the right beyond the railway, a rather sharp eminence, which, though it does not form a summit of its group (and is only upon the

side of the general slope upwards towards that summit at Redfold), is so placed as to afford a good view of Leith Hill and to be seen clearly from Leith Hill against the sky. This point is just behind the farmhouse known as New Place, and the eminence in question is known locally as Borough Hill. It was towards this point that the alignment from Leith Hill was taken, and from this point towards Leith Hill that that alignment ran.

Had that alignment been continued, however, without deflection, it would have missed the crossing of the Arun at Pulborough Bridge by some three-quarters of a mile, and would have struck the river at the point where the marsh is at its widest.

So what was done was this. The alignment Leith Hill to Borough Hill was kept up exactly until it reached a point close enough to Pulborough to permit a new, short sight being taken, which should lead the road directly to Pulborough Bridge. (See pp. 59 and 95.)

This point of flexion occurs at the south wall of a building called Todhurst Farm. It is exactly $3\frac{3}{4}$ miles from the southern end of Pulborough Bridge, and these $3\frac{3}{4}$

miles may be regarded as a very short separate limb uniting the first long one, which ends at Pulborough, with the second long one, which ends at Leith Hill. The angle between this short "junction," and the main line, which runs absolutely straight from Todhurst Farm to the shoulder of Leith Hill, is one of 7°, the main line being directed 22° 30′ East of North, and the short $3\frac{3}{4}$ miles from Pulborough Bridge to Todhurst Farm 29° 30′ East of North.[1]

The precise point upon the shoulder of Leith Hill which was chosen for the terminus of the second limb, was that spot upon the eastern slope of Leith Hill which is just high enough to show clearly above the rolling land of the Weald and yet just low enough to come below the steep part of the slopes.

The Weald rises in great billows up towards the county boundary, and a mark set much below the 400-foot contour might be invisible, and would always be doubtfully

[1] Similar slight deflections, due to the same cause, are to be found upon many other Roman roads. That running north and east from Vernand, in Picardy, for instance, presents a most interesting point of flexion of the same sort, due to the difficulties of the broken ground west of Bellenglise.

observable, from the lower and distant part of the district. On the other hand, Leith Hill is 965 feet high. It was important to save the road at once from too high and

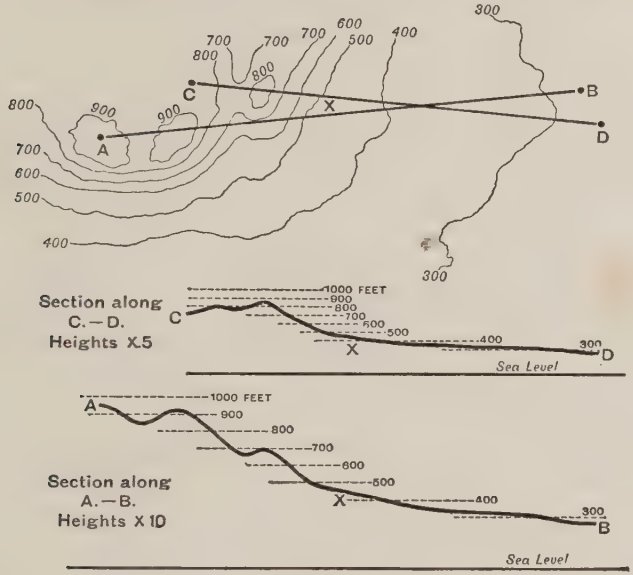


FIG. 9.

too steep a climb. The slope of Leith Hill towards the east is upon the sections shown above, and it is evident that the road using the platform at X could save the steep bank above yet view the Weald.

To all these necessities the Stane Street here conforms.

A house called Moorhurst stands just above the 400-foot contour on this eastern slope of Leith Hill and at the point just below where the slope begins to grow steep; about 350 yards up from this farm, northward by a little west, and in a field which lies immediately south of a wood called Ryefield Copse, was set up the mark which formed a terminus, a northern terminus for the second limb coming from Borough Hill, near Pulborough, a southern terminus for the third short limb, which was plotted so as to take Dorking Gap. I will further discuss this point when I come to the details of the road.

C

THE LIMB FROM LEITH HILL TO JUNIPER HILL (ALSO CALLED JUNIPER WOOD HILL).

The third short limb which negotiates the Dorking Gap is the most tricky part of the road and the one that needs the closest ex-

amination, if we are to understand how it was plotted out.

From the point close to Moorhurst, where the northern terminus of the second limb was established, if you look forward in the direction of that limb and imagine the Stane Street continuing its old direction unchanged, you will discover that direction to point right at the steepest and highest part of the Box Hill group. It makes for the precipitous slope of Brackham Warren, and for the very highest summit of those heights.

If you take a direct line from the same point to London Bridge it differs by less than one degree from a continuation of the second limb[1] and the same precipitous slope is met by it.

It was the business of the Roman engineers, of course, to avoid such a difficulty as that, and to turn it.

From where this terminus stood, upon the shoulder of Leith Hill they had a view round the corner of the valley of the Mole and of

[1] On which account one might maintain that the whole system from Pulborough Bridge to London Bridge was ultimately based on one great alignment. I doubt it. The coincidence is not absolute.

its passage through the North Downs, which is called "Dorking Gap."

They might, of course, have directed the road on to the river valley and followed that valley right round the flank of the hills, but that would have condemned them to a marshy soil in the latter part of the section and would have forbidden themselves that plotting out of a straight alignment, which was essential to their method.

What they did, therefore, was to look for a conspicuous point, not too high, upon the shoulder of the Box Hill group, and this they discovered a little above the 300-foot contour upon the slope of the promontory marked A B upon the accompanying sketch, and they fixed their new terminal at the point C, in which is now Juniper Wood. It stood 5 miles and 6 furlongs from their existing terminal, D, upon the shoulder of Leith Hill. To that point C was their alignment of the third limb drawn, and from it, as we shall see later, the alignment of the fourth limb was taken, which led that fourth limb from C to London Bridge.

But the point C is not visible from the soil of D, the Leith Hill terminal of the second

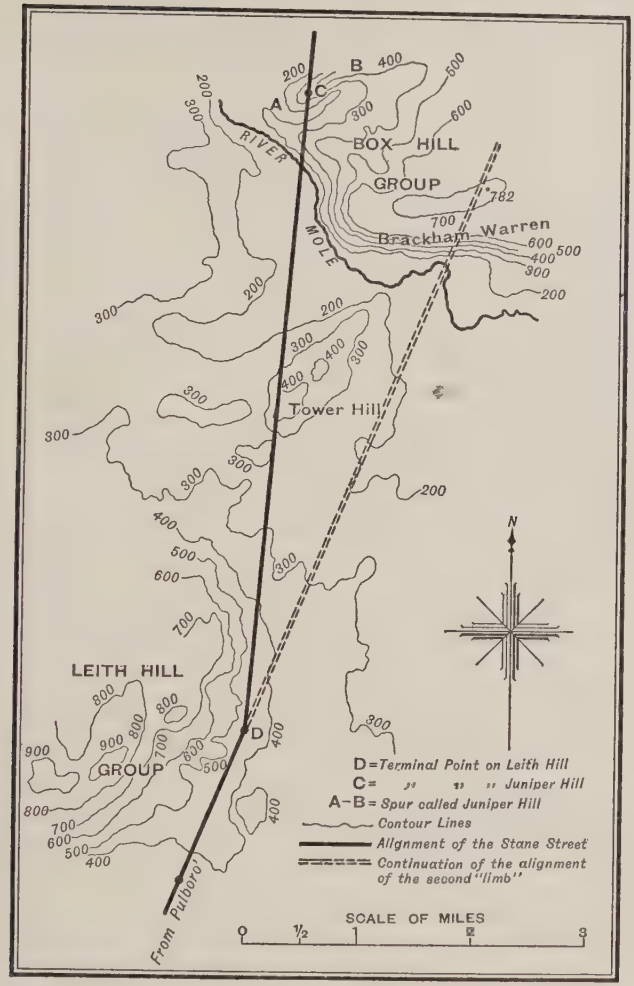

B
A
C
BOX HILL
GROUP
782
RIVER MOLE
Brackham
Warren
Tower Hill
LEITH HILL
GROUP
D
From Pulborough
N
D=Terminal Point on Leith Hill
C= " " " Juniper Hill
A-B= Spur called Juniper Hill
Contour Lines
Alignment of the Stane Street
Continuation of the alignment of the second "limb"
SCALE OF MILES
0 ½ 1 2 3

FIG. 10.

limb. The hill called Tower Hill, just to the south of Dorking, intervenes and hides C from the view of a spectator on the ground at D.

It is a very close matter.[1] From quite a low staging upon the site of the Leith Hill terminus one overlooks the corner of Tower Hill and catches the point C upon the promontory of Juniper Wood. Whatever method they arranged for casting this alignment, whether, as is probable, by setting intermediary marks upon Tower Hill, or directly by establishing two low scaffoldings at either end of this limb, one at C on Juniper Hill and the other at D upon the shoulder of Leith Hill, this was the line they plotted out.

But unlike any other of the great straight sections of the road, this section was unable to keep to its alignment for more than a small proportion of the whole way. It had hardly started when it had to deflect somewhat to the left or west, in order to avoid the isolated steep of Tower Hill. The de-

[1] D is just under 500 feet—say 470 at its base. C is just over 300—say 325, and the intervening hill is just over 400 feet.

flection, by the time the road had got to the Pipp Brook, was as much as 600 yards.

It had then to recover the alignment by bending eastward again, and it even had to go a little too much to the east, in order to catch the exact crossing-place at Burford Bridge, which tradition and experience had fixed as the best passage for the river Mole.

When the Stane Street had passed the river at Burford Bridge, it yet could not keep the exact alignment, on account of the steepness of the contours just beyond the river. It had to bend somewhat westward again, until, nearly following the line of the present road, it came to the gardens of what is to-day Juniper Hall. But though at this point the terminal mark stood just above, not 300 yards off, the road could not reach it. The hill was here too steep. It had to go round the mark, somewhat below it to the west, in order to take the curve of the precipitous hill; and thus it is that at the end of the third alignment and the beginning of the fourth the terminal mark from which those alignments were taken does not lie upon the road at all.

D

THE FOURTH LIMB, FROM JUNIPER HILL TO LONDON BRIDGE

The beginning of the fourth alignment is but a continuation of this flanking way round the shoulder of the hill for a matter of not quite three-quarters of a mile. The actual road and the beginning of the straight alignment from Juniper Wood to London Bridge, very nearly correspond with the Lodge in Juniper Hill Wood. But the straight line plotted out crosses immediately afterwards, a deep and precipitous combe, around which the road is compelled to skirt to the eastward.

The Stane Street and its theoretical alignment from the terminus in Juniper Hill Wood on to London Bridge, do not coincide until we reach an unmistakable point A just above the 400-foot contour, and exactly 500 yards south-east of Cherkley Court. There the winding way suddenly becomes dead straight for 2 full miles, and exactly coincides with the alignment in question.

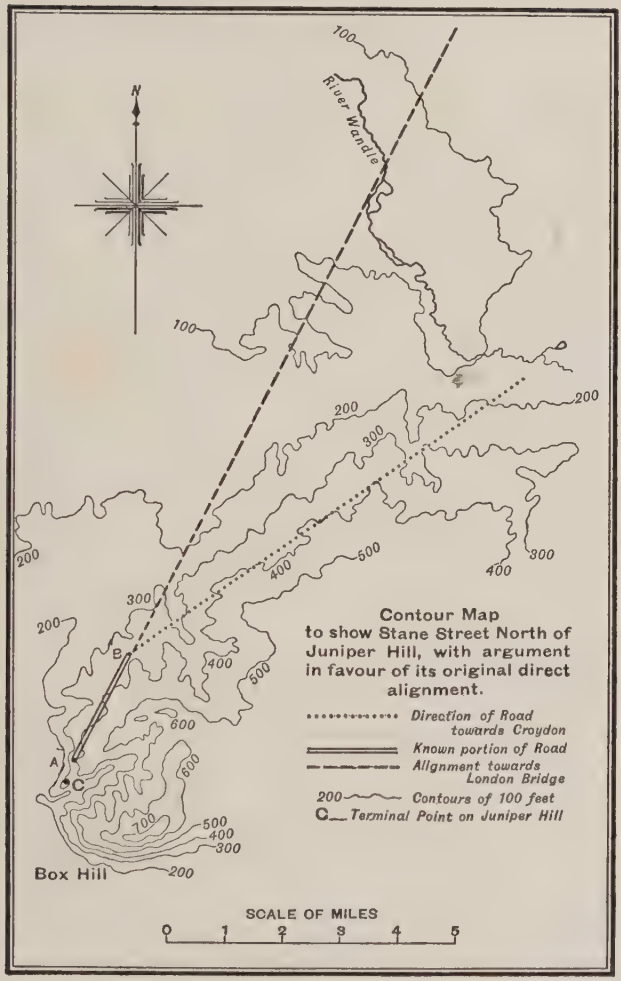

N
River Wandle
100
100
200
200
300
300
400
400
500
500
600
600
700
Box Hill
A
B
C
Contour Map
to show Stane Street North of Juniper Hill, with argument in favour of its original direct alignment.
Direction of Road towards Croydon
Known portion of Road
Alignment towards London Bridge
200 Contours of 100 feet
C Terminal Point on Juniper Hill
SCALE OF MILES
0 1 2 3 4 5

FIG. 11.

From that point onwards I have concluded that the Stane Street followed an undeviating straight line to the crossing of the Thames at London Bridge.

This assertion cannot be made without admitting the considerable criticism to which it is subject.

From the point B, 200 yards south of Thirty Acres Barn, in the parish of Ashtead, all trace of the road upon this alignment is probably lost. Some observers think they have discerned portions of it here and there, especially in the parish of Cheam; but the evidence is too doubtful to be admitted, and until something more certain is available my conviction that the road, though now lost, ran directly for London Bridge from this point must depend upon proof of another type.

Against this theory it must be noted that a way which is traditionally of Roman origin diverges at this point near Thirty Acres Barn from the Stane Street, and points in the direction of Croydon and what was once conjectured to be the site of Noviomagus. This divergent track has survived. It can be followed very nearly to the Grand Stand

of Epsom Racecourse. On the direct line which I suppose for the true Stane Street no relic remains. Many therefore would assert that the Stane Street was *not* continued on any direct alignment towards London Bridge, after this point near Thirty Acres Barn, and they would bring in support of their contention such arguments as the following :—

1. Branching off at this point would lead the road to a main road leading from Shoreham up to London through Croydon. It would therefore economise expense.

2. Now a road certainly ran—though only two short sections survive—from the mouth of the Adur northward through Croydon, and this road a deflection of the Stane Street by Thirty Acres Barn would ultimately join.

3. It would get rid of the difficulty of crossing the Wandle, whose flat and marshy valley lies just athwart the straight line between Epsom Downs and London Bridge.

4. The diverging road has certainly been in continuous use at some time, since the first part of it survives, while there is no local trace of the straight way pointing towards London Bridge.

Against these arguments I would set the following :—

1. There certainly was a road leading from the Adur mouth through the neighbourhood of Croydon to London,[1] though most traces of it have disappeared : but if the Stane Street had been intended to be deflected into it no one would have been at the expense of constructing the difficult bit through Dorking Gap in order to effect a deflection of this sort *north* of the Surrey Hills. The obvious thing would have been to drive a straight line from Pulborough to Reigate, and it would have been folly to have engineered the difficult passage of the Surrey Hills for nothing.

2. The crossing of the Wandle is not so difficult as the first crossing of the Arun, nor more difficult than a hundred river crossings up and down England which the Romans created to serve their military needs. It is not comparable, for instance, to the enormous business of bridging the Mersey marshes, which was done in two separate places.

3. The disappearance of the road northward

[1] Only two sections have been found, but though short they are in an exact alignment one with the other, and no degree of pedantry can overlook such evidence.

THE GRAND STAND, EPSOM RACE COURSE

shows these very plainly; an alignment from the terminus I have spoken of to London Bridge follows an easy and exact slope. The divergent line, though useful perhaps as a junction line, has to cut across difficult and abrupt contours.

The last and much most weighty argument

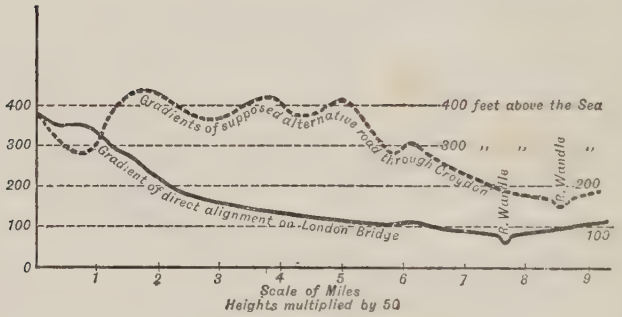


FIG. 12.

is the fact that for the first 2 miles and more from the terminus, the direct alignment points not approximately towards, but *right at* London Bridge; and this can no more be a concidence than can the direct pointing of the alignment over the South Downs towards Pulborough Bridge. This seems to me an argument so clearly convincing that it hardly needs support.

With this we conclude the fourth great limb of the Stane Street and the last of its series of alignments.

We have next to consider the military character of the road as shown in its series of camps or fortified halting-places, and established at distances of one day's march each from its neighbour, for which our conjecture of their use and the titles of antiquity suggest the name of *Mansiones*. For though this name refers to a civil rather than a military use and is concerned with the posting relays on the great roads of the Empire, yet the size of the works that remain and the chief use of all such ways during peace lean me towards the latter title.

III

THE CAMPS OR MANSIONES

The use of the Stane Street as a military way involved a feature not accidental or probable, but necessary: and this feature was a number of stations the distance between which should correspond to a day's march, and in which the troops should rest at the end of each stage.

These stations would presumably be in the form of camps. The size of these fortified points would not limit the marching units: they might be of a much smaller size than could accommodate the occasional arrivals, which might go under canvas outside their ramparts. But they would afford permanent stations of defence, contain permanent small garrisons, defend the difficult passages, and stable relays of post horses for civilian use. For all these purposes a small area would suffice. Such camps would be

exactly organised and would contain temporary wooden, or permanent brick or stone, buildings.

Now, an average day's march for a considerable force is a matter of from 12 to 13 miles.[1]

[1] The comparative shortness of this distance may surprise the reader. Men are, of course, capable of very much more, and the feats of endurance which have been accomplished by troops under special circumstances—especially bodies of small size—abound in military history. But when there is no occasion for haste, the average set here in the text is that which will be found to agree most nearly with experience. The time between the arrival of the head of the column and the moment when its rearmost files reach the appointed halting-place must be considered. If authority may be quoted, we have Schellendorf, who lays it down that a day's march should not exceed, save in emergency, an average of 22 kilometres; Colley, who estimates from 12 to 15 miles' actual march a day; Rustow, who considers a considerable body of troops fortunate if it marches from 15 to 20 kilometres in a day (that is, from a little over 9 to 12½ miles); and the regulations of modern armies, which all lay down some such unit.

If example be preferred, we have Marlborough's advance to the Danube in 1704 covering, counting rests, only a little over 10 miles a day; the Fifth German Army Corps in the Franco-Prussian War, averaging in actual day's marching under extreme pressure 13½ (with a maximum single day of 21 miles), and, counting rests, only 10½; the week's dash of the Turkish Army to Plevna which, for all its necessity for haste, averaged but 14½ miles; and, quite recently, Lord Roberts' advance on Johannesburg, of which

We find, accordingly, the first of these halting-places precisely 13 miles from the East Gate of Chichester at Hardham Camp, and the construction of this work upon the south side of the marsh is in part explained by the desire of the Roman authorities not to make the stage between Chichester and the first halt too long a one. Other reasons for choosing a site south of the Arun rather than to the north of it are suggested elsewhere, but the necessity for not exaggerating the first or last stage of a march, to which allusion will later be made, was undoubtedly predominant.

Had the first camp been designed on the further or northern side of the Arun, it could hardly have been constructed in the midst of the occupied area which the Roman re-

16 days' actual marching averaged 12 miles a day. The Grand Army of Napoleon accomplished perhaps the best piece of marching which the history of war records. Speed was in the campaign of 1805 the principal element necessary to success. The corps which had the longest distance to travel, that which started from Boulogne, covered the first 400 miles, with very few sick, in an average day's march of 14·8 miles; but the feat was exceptional.

These and an indefinite number of other examples could be quoted to show that the unit mentioned in the text is a fair average.

mains at Pulborough, but lately conspicuous, prove to have existed. It would, again, hardly have been constructed in the hollow where the railway now crosses the road north of that place; the first convenient place for building a camp north of the Arun would have been the hill beyond the railway-crossing, and this point would have been more than 15 miles from Chichester and waterless.

We must look for the second halting-place at some distance north of Hardham, more or less equivalent to the distance which Hardham itself is from the East Gate of Chichester. This second station we find situated somewhat as Hardham is, just south of the second crossing of the Arun at Alfoldean Bridge.

The second stage thus formed is not quite as long as the first one. It is just under the 12 miles; but, had the camp been constructed any further north, it would have lacked good water.

Now, in such a series one might think it a fairly easy matter to discover the third and fourth halting-places.

The total distance from the East Gate of Chichester to the Thames at London Bridge,

following the line of the Stane Street, is, as we have seen on p. 58, 56 miles and $7\frac{1}{2}$ furlongs. Five average stages, one of them, the last perhaps, a little short, would account for this distance. We must therefore look for four camps, which will divide the whole line into five more or less equal stages.

The first and second stages we have found remaining in ample evidence till modern times at Hardham and Alfoldean respectively, and, as I have said, it would seem an easy matter to fix, within a comparatively small area, the probable position of the third and the fourth.

As a matter of fact, the task presents certain difficulties. No remains have yet been discovered which warrant us in positively fixing the site of either of these two northern camps upon the road, but the absence of positive proof is not unaccountable and it merits discussion.

Let us approach this discussion by postulating the existence of these two stations. They once existed as surely as did Hardham and Alfoldean camps. The thing is not hypothetical, but certain.

There could have been no organised

military communication along such a road unless such halting-places were regularly established. To move large bodies of civilised men to and fro constantly by a single road, without reliance upon towns or military stations at the end of each stage, is physically impossible. If we do not find such halting-places in positions where we should approximately expect them, it can only be because they have disappeared, if in the open, or because they correspond with some place of long and continuous habitation.

We must not expect any stage, as I have said, to be *more* than 13 miles. It may be usefully as *short* as 10 or even 9. An average for the whole distance would give us just under 12 (11·3875).

Now, following up exactly 12 miles from the last of these stations, that of Alfoldean Bridge, and measuring along the line of the Stane Street, including the bend round the corner of Leith Hill, the twelfth mile takes us well beyond Dorking to a point north, and near to Bradley farm, where the railway crosses a spinney some 200 yards west of the main road from Dorking to London.

But the camp could not have stood at this

precise spot. It is not upon water. It is commanded somewhat from above (even at the low ranges of missile weapons in those days); and it is not likely that its circumvallation would have wholly disappeared in the open country, even upon good arable land such as is the land near this spot.

Where, upon the analogy of the other two camps, should we look for this third *mansio?* Preferably, not far from the crossing of a stream. The camp at Hardham commands the crossing of a stream, and is protected by it. Good water is near at hand, and the marsh defends one approach to the place. Upon such an analogy we might expect the third *mansio* to lie nearer the thirteenth than the twelfth mile, and to be constructed somewhat near the left bank of the Mole, on the south of Burford Bridge. But there is here no trace of it, and even less reason for its disappearance than at that point exactly upon the twelfth mile which we have decided to reject.

Moreover, to take a longer rather than a shorter stage at this point of the road would have been an error in organisation, for the two first stages were already over the average, and, with a *third* so advanced, the remaining

distance to London Bridge would have been hardly sufficient to afford two full stages. The only other water available is the Pipp Brook, which would be amply sufficient for the supply of such a station, and which afforded, with the help of certain wells, the water supply of Dorking for centuries, though not affording any serious defence.

The conclusion is forced upon us that the third camp upon the road lay within the limits of Dorking itself, and may very probably have been the origin from which Dorking sprang.

Such a site would account for the disappearance of the Vallum, for nothing destroys old earthwork like building and continued rebuilding upon a thickly inhabited site. Nay, not only does the presence of a human community tend to obliterate regular earthworks, but even substantial buildings are lost in such spots, because they are more thoroughly quarried there than elsewhere when they begin to fall into ruin, and the traces of them more completely disappear in continuous towns than in wild districts.[1]

[1] Thus it is remarkable that the camp at Hardham has yielded no stone or brick, standing as it does close to the

This lesson in archæology is deeply impressed upon any man who has studied the remains of Rome in North Africa.

There deserted cities, such as Timgad, stand in their entirety. Cities where the population dwindled, such as Cæsarea, are less preserved. Sites where human habitation has long been the rule, and where population has been dense, obliterate all but the great public monuments, and occasionally even these are wholly destroyed. Lambæsis was a continuous settlement; it has far less to show than Timgad, near by. As for Hippo, that great city of St. Augustine, not a trace even of its foundations now remains, but Bone has arisen at its expense.

It is to be presumed, therefore, that this third station, which *must* have existed somewhere between Mickleham Hill and Holmwood, has been obliterated by the perpetual turning and re-turning of the inhabited earth at Dorking; and that either some four acres in Dorking (for of such extent were these small

site of the Priory with its numerous buildings in the Middle Ages and within easy hauling distance of the populated bank of the Arun at Pulborough, while Alfoldean, in the depths of the Weald, and in a spot deserted by men, has yielded ample relics of buildings.

camps) bore quadrilateral earthworks which sheltered the marching troops; or that a small town, of which Dorking is the descendant to-day, received them.

Now, on the analogy of the two other camps which this Roman road directly traverses, and with our knowledge of the Stane Street having been discovered by digging in the north-west corner of the old churchyard at Dorking, one might suggest a site to the south of the west end of the High Street, and perhaps including part of that thoroughfare; but the suggestion would remain mere conjecture had we not other reasoning to guide us.

We have such reasoning available. The point is one only to be arrived at by converging lines of proof; but it is of interest to establish it, and to show why the writer regards it as a matter historically certain that Dorking is of Roman origin, and was the third *mansio* upon the road from Chichester to London.

Arguing from stations that are known to this unknown station, we find attaching to the two known stations the following characters.

(1) Each is, as might be expected of a Roman work, quadrilateral and nearly square.

(2) The road passes through each.

(3) Each measured somewhat over 450 feet square.

(4) Each was in the close proximity of running water: Hardham within 200 yards, Alfoldean closer still. Alfoldean is right on the stream; Hardham is as close to the stream as it was possible to build, considering the nature of the 200 yards of ground between the river and the hard ledge which supports the camp.

(5) Each stands to the south (or thither side, looking from London) of the stream upon which it is built. If we knew the reason of this last feature, we might use it further in our argument. As it is, we can only note the fact and suppose it to have some reason other than mere accident. We must suppose that the military or police plan, to serve which the Stane Street was built, regarded the presence of an obstacle towards the north or London side, as more useful in preserving a station from attack, than an obstacle upon the Chichester or south side.

Now, to these analogies add certain other known or obvious facts and probabilities.

We know that most towns growing up round an old Roman settlement of any sort have the centre of their lives at the original Roman centre. The exceptions (such as Manchester and Huntingdon and Cambridge) probably represent settlements which grew up outside the entrenchment of the fort.

Next we must remember that the disappearance of Roman earthwork in a district of permanent habitation will only coincide with the built ground; where the earthwork ran into fields or open space it would remain, whether Roman or pre-Roman or post-Roman; or at least it is much more likely to remain in such places than where there has been continual building and rebuilding.

We can further be certain that the station would be traced upon a fairly level piece of ground, and upon a dry one.

Finally, we have old but uncontradicted and valuable testimony to the effect that the Stane Street was seen when graves were dug in the north-west corner of the old churchyard at Dorking,[1] as at B in the sketch map on p. 131.

[1] Both Campden and Aubrey testify to this. See also the article in *Surrey Archæologia*, vol. x. pp. 104, 107.

Now, let us put all these together and see the limits wherein we can not but determine the Dorking station to have lain.

We must look for it close to its water supply, and therefore somewhere to the south of the Pipp or Mill Brook, and fairly close to that supply of running water.

Now, we cannot put the camp on the brook to the north of the church and regard the traces of the road in the churchyard as the entry towards the *south* gate of the camp. We cannot put it thus north of the churchyard and between the church and the brook, for there is not room there for an entrenchment between 400 and 500 feet square.

We must look for it, therefore, somewhere to the west or east or south of the churchyard.

It could not lie right on the brook to the west of the churchyard, for not only would its northern entrenchment then have lain upon somewhat marshy ground (and, what is more, on open ground still remaining, and ground which has been still more open until recent times, which would surely bear traces of its wall and ditch), but (what is convincing) no line drawn through the centre of such a

position towards Burford Bridge could possibly have taken the road out of the camp through Dorking churchyard.

It could not lie to the east of the church for exactly the same reason, and also because such a position would have involved a sharp, extraordinary, and quite useless bend in the road.

On the other hand, we cannot put it very far to the south of the churchyard, because a square of 500 feet every way would only just fit in between the south of the churchyard and the abrupt slope of Rose Hill.

All this would lead us to expect the station to have lain somewhere to the south, or nearly to the south of Dorking churchyard, and quite close to it on that side.

But we can find surer ground for this spot. We get further indications from the line of the road at this part.

The Stane Street, after it turns the corner at the shoulder of Leith Hill, points straight for Burford Bridge, where we know that, as a fact, it crossed. As we have seen, in speaking of the alignment here, it was not able to go right across the broken ground of Rose Hill and Tower Hill, to which it points. It

had to be deflected somewhat to the left, or west, in order to pass round the base of these steep knolls; but it would, when it had passed round their base, try to get back as quickly as possible, for the sake of economy, to its main alignment. That is what we find it doing, for instance, between Bignor and Pulborough. Every unnecessary yard to the west would be a loss or extra expense of labour and material, very unlike Roman workmanship and, as a fact, without parallel in any one of the many great Roman roads which we can study.

In connection with all these considerations, it is impossible to place the station in any position such that its centre should have been more than 100 yards south of the point where the High Street and West Street meet, or more than 100 yards west of the same point. We have, therefore, at that point a very good approximation to what must have been the centre of the work. Put it further west and you find yourself out of the alignment of the road as it comes in from the south, while you also make it impossible for the road leaving the camp towards the north and Burford Bridge to touch the corner of the old church-

ALFOLDEAN BRIDGE

yard. Take it further south, and you infringe upon the abrupt slope of Rose Hill. Further east, as I have said, you cannot put it without presupposing useless divergence and expense, as well as making impossible its passage through the churchyard. Further north the brook stops you. Finally, this point, where West Street and High Street meet, exactly corresponds to the oldest and most continuously occupied portion of the town.

Add to all this the recent discovery of the road crossing West Street at the point A in the accompanying map, and you can hardly put the camp elsewhere than in the angle between West Street and South Street, and just where they meet.

Such are my reasons for believing that the third station upon the Stane Street was a quadrilateral, including the present meeting of the Three Ways at Dorking, and mainly in the angle between South Street and West Street, and it is to this point that I shall count the third march of the road to have lain from Alfoldean northward.

This third day's march along the road from the south of Alfoldean Bridge to this point in Dorking town is, measured along

the road itself, exactly 10 miles and 1155 yards. This is a shorter distance than the first two stages, but one of them is a trifle long, and it is obviously designed on the same plan for a day's march as these first two sections. Moreover, it leaves two reasonable stages for the remaining distance to London.

The site of the fourth *mansio* is even more difficult to establish; or rather our conjectures with regard to it (for we can do no more than conjecture) cannot even be as precise as the suggestion made with regard to the supposed *mansio* at Dorking.

There are two reasons for this: the first is that, as we approach London, we come to districts where the earth has been turned and re-turned in full confusion for centuries, and where modern building has obliterated every ancient landmark.

The second reason is, that the track of the road itself is only conjectural after the neighbourhood of Thirty Acres Barn at Epsom Downs.

There are further difficulties. The distance between Dorking and the southern extremity of London Bridge, following along

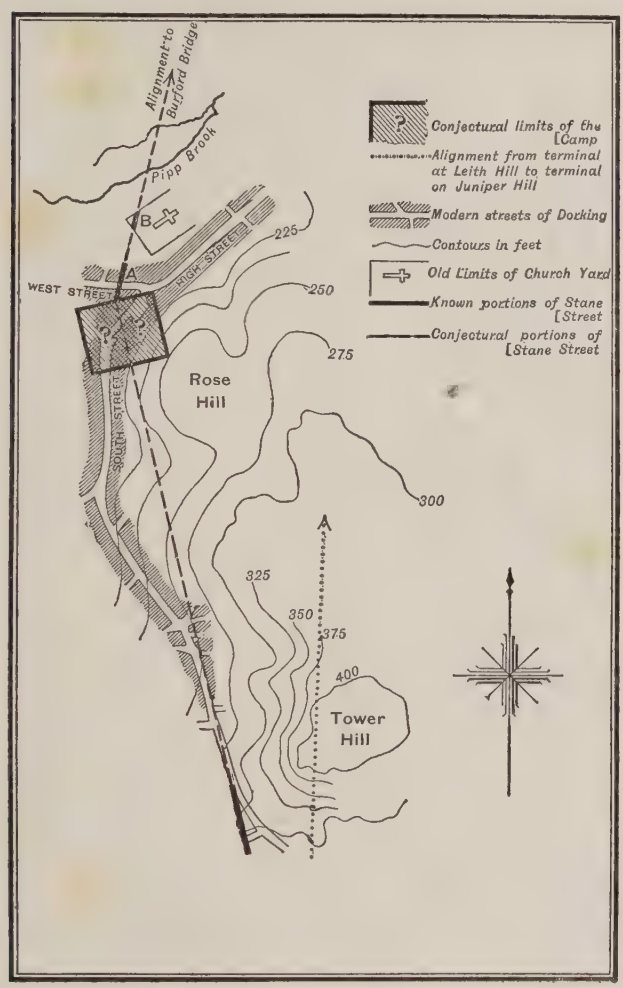

Alignment to Burford Bridge
Pipp Brook
B
A
WEST STREET
HIGH STREET
SOUTH STREET
225
250
275
300
325
350
375
400
Rose Hill
Tower Hill
Conjectural limits of the Camp
Alignment from terminal at Leith Hill to terminal on Juniper Hill
Modern streets of Dorking
Contours in feet
Old Limits of Church Yard
Known portions of Stane Street
Conjectural portions of Stane Street

FIG. 13.

the line, first actual and later conjectural, of the Stane Street, is no more than 22 miles; so that, with the third camp situated within the limits of Dorking, a stage exactly bisecting the distance would yield two sections of 11 miles each. If, as is more probable, a long stage were plotted out from Dorking, with the object of making the last march into London designedly short (on the analogy of similar approach to large cities throughout the Empire),[1] then this means that the *mansio* for which we are looking must be sought yet further and will perhaps bring us into the hopeless maze of the South London suburbs.

Let us examine the evidence and see what we can make of it.

So far as the discovery of positive evidence goes, that is perhaps no longer obtainable.

One must never be quite certain of such matters, for the negative argument in history is always a weak one, and, in the case of a Roman road in particular, the spade brings

[1] The first or last stage in and out of a great city was always short. The longer time required under the conditions of a halt in such a place or of departure from it, the exit or entry through traffic, the hour required for finding or leaving scattered billets, account for this.

up unexpected testimony year by year. Meanwhile, it seems unlikely that in so frequented a neighbourhood as that between Epsom and the London suburbs, cut recently —that is, during the wide development of archæological research—by so many railways and other works, some past evidences of a Roman military station should fail us *unless that station were situated on a spot inhabited throughout the Dark and Middle Ages.*

The problem is further complicated by the fact that the route of the Stane Street from Epsom Downs to London Bridge is necessarily conjectural, and that authorities will even be found (I have argued against these on a preceding page) who believe that the road was deflected eastward towards Croydon. Supposing, however, that the road followed, as I maintain, its normal straight line to London Bridge, the straight line along which it points where it is last visible upon the Leatherhead and Epsom Downs, we may, following that road, make certain conjectures as to the site of the fourth station upon the analogy of the other three, and upon the analogy of other Roman military ways throughout Europe.

In the first place, we have the normal maximum for a march of 13 miles, or, at the very most, of 14 and this takes us, counting from the junction of West Street and High Street in Dorking, to the crossing of the River Wandle in the neighbourhood of what was for centuries Merton Abbey.

This is the extreme site northwards at which we can place the fourth *mansio*. It leaves for the last day's march along the conjectural line of the Stane Street to London Bridge rather more than 8 miles.

Next let us observe that a point exactly equidistant from Dorking and from London Bridge (a point which there is no particular reason to fix on as the station, but which gives us a measurement) takes us into Nonsuch Park, near Cheam.

In the third place, let us remember that the station must have had water; and finally, that, in the absence of remaining and traceable earthworks, the probability always inclines towards a long-inhabited site.

The first thing we note is that there is not along this great stretch of way any such earthwork remaining. At a point on the Roman road half-way between the fifth and sixth

mile from Dorking, and at right angles from the road down the hill north-west towards the church in Ashtead Park, you do indeed come, at a distance of about half a mile, upon a camp that is probably Roman. Of what service this bit of earthwork was, we cannot now tell, but we can be certain that it was not the station for which we are looking.

Suppose even there were no station at Dorking, and imagine for a moment this camp at Ashtead to be the station next after the Alfoldean one, and you have a march of 18 miles between camp and camp. No such distance would have been laid down for the ordinary march of troops passing up and down a military road in time of peace. If we admit the station at Dorking, the camp at Ashtead is of course a great deal too close to correspond to the next station northward. Moreover, the road did not point at it or pass through it, as it certainly did through the two known stations at Hardham and Alfoldean and the conjectural one at Dorking; it leaves it no less than half a mile to one side. We may therefore neglect the work at Ashtead.

In all the run from what would have been

the sixth milestone from Dorking, right away to the Wandle at Merton Abbey—a run of 8 miles—the road is lost, as we shall see when we come to the special discussion of that section. Following the straight line which points accurately to London Bridge, it passes through no continuously inhabited spot. Epsom and Ewell it leaves to the left, Cheam and Sutton to the right. It is, of course, possible that either in Cheam or in Ewell, and especially the latter, upon land continually inhabited and still provided with water, a station, which continuous habitation has caused to disappear, was situated; but we have no proof of it in any form, nor any ground for inference; and upon the analogy of Roman stations in other parts of the Empire where the road approaches a great city, we should not look for a station at such a distance from that city. A *mansio* at this point would leave a march of full 14 miles on to London or out of London; and 14 miles for the first *mansio* or first day's march *out* of London is not to be thought of. If a long march must be premised somewhere, the last march but one would obviously bear it in any thought-

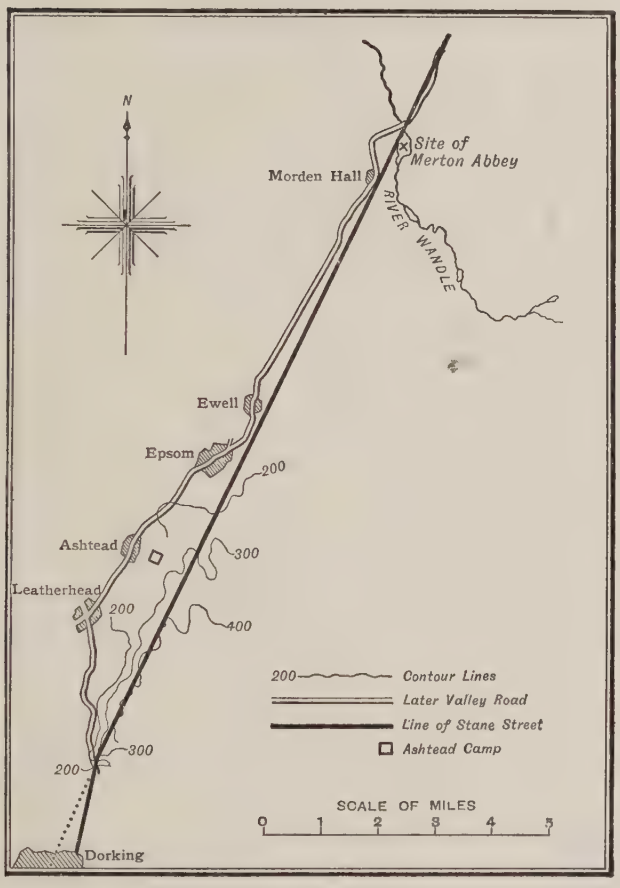

N
Site of
Merton Abbey
Morden Hall
RIVER WANDLE
Ewell
Epsom
200
Ashtead
300
Leatherhead
200
400
200
300
200
Dorking
200 Contour Lines
Later Valley Road
Line of Stane Street
Ashtead Camp
SCALE OF MILES
0 1 2 3 4 5

FIG. 14.

out system; 14 miles from *Dorking* is a far more likely point, and that gives roughly the crossing of the Wandle in the neighbourhood of Merton Abbey.

This last site has the further argument to recommend it that it is situated, as is each of the two known sites, Hardham and Alfoldean, upon a considerable stream, defending the crossing of that stream and guaranteeing communication across it. Next we have noted that the neighbourhood was used during the early Middle Ages for the establishment of a great monastic institution and one with origins earlier still. This is an argument of some importance. The early monasteries were nearly all of them situated upon these Roman ways, which, until the thirteenth century, were the best means of communication and the arteries of a country. Roman buildings often served them as a quarry for their materials of construction, and in at least a dozen demonstrable cases in North-eastern France and Southern Britain, the continuity of a Roman station with a mediæval monastic establishment or the close proximity of one to the other, is apparent.

Conjecture, then, points to the crossing of

the Wandle by Merton Abbey as the site of the fourth and last *mansio* upon the line between Chichester and London.

We may sum up and say that the total distance between the East Gate of Chichester and the South Bridge-head of London Bridge, a distance 3 miles short of the full 60 miles, must have been divided into five stations: that of these two are known and have left clear and indisputable relics—the first at Hardham, the second at Alfoldean. That these two establish, the first a march of 13 miles, the second one of about 12. That much the most probable situation to be discovered for the third station is the town of Dorking: a situation giving a third station of just under 12 miles. And finally, that a very possible and even probable situation for the fourth would be the crossing of the Wandle near Merton Abbey, which would give a fourth stage of over 13 miles, indeed nearly 14, leaving, upon the analogy of many other short last stages upon the great roads on entering the main towns of the Empire, only 8 miles for the fifth and final division of the road.

IV

THE HISTORICAL CHARACTER OF THE ROAD

The reader of history demands first of a subject that he should hear the historical framework within which it is contained.

What dates may be assigned to the origin of his subject?—to its use, to its decline, or its extinction?

He next requires to hear what events fall within that framework, and in their case also to learn with as much exactitude as possible the date of each and its connection in time with other things. It is only after satisfaction upon such points that he is willing to turn to more general considerations, and the questions of character, utility, and effect upon the world.

This attitude of the mind towards historical art is eminently just, and is as reasonable as that other attitude adopted by the plain

man towards plastic art when he requires of a picture that first and before any other consideration it should resemble that which it represents.

Unfortunately, in the realm where archæology and history meet we cannot satisfy this prime question of the historical reader.

We are compelled, in the absence of positive human witnesses and established records to guess, to approximate, to set large margins of anterior and posterior dates within which an event or a use shall be placed, often to forego altogether the mention of any actual historical incidents connected with our subject, and this from the fact that no such incidents remain on record.

All this unfortunate lack of certainty, which applies in general to most archæological discussion, applies in an especial manner to an historical discussion upon the Stane Street.

There is no single record remaining of its continuous use.

There is no record remaining of its use at some one early period from which we might infer its continuous use.

There is, of course, no record remaining of its inception or building, nor so much as an

allusion to its decay or repair—at least no record before quite modern times.

With the exception of the battle (and Synod?) of Ockley, the only recorded incidents of the Dark Ages connected with the road concern the neighbourhood of London, such as the death of Cynewulf at Merton, and, as we have seen, and shall see further, the neighbourhood of London is precisely the most disputed portion of its whole trajectory.

We are thrown back, therefore, in the historical discussion of the Stane Street, upon the evidence afforded by the remains of the Street itself, aided by analogy.

There are but two positive records of Roman roads in this country apart from the evidence which the relics of those roads themselves afford. The first is the document known as the "Itinerary of Antoninus." The second is a late [1] and probably distorted copy of a general Roman map, called "Peutinger's Tables."

We can, indeed, glean from documents of another character, literary or geological but not strictly topographical, evidence which is in the total very large, upon the routes

[1] They say of the thirteenth century.

pursued by armies, commerce, and administration in the first four centuries. But with the exception of Peutinger's tables and the Antonine Itinerary, we have no positive evidence remaining upon the scheme of Roman roads.[1]

Peutinger's tables do not include any part of Britain save a portion of the south-eastern coast. The rest of the fragment regarding Britain has disappeared.[2] The Stane Street is therefore excluded from this piece of evidence.

The Antonine Itinerary, the sole remaining witness, makes no mention of the Stane Street.

It might be supposed that in the absence of evidence, in the silence of the Antonine Itinerary with regard to the Stane Street, all we had to do was to regret that lacuna, and to pass on to such evidence as the road itself affords.

Unfortunately this is not the case, for there has grown up a deplorable academic

[1] The itinerary of "Richard of Cirencester" which Bertram fathered deserves notice. It is not demonstrably a mere forgery. But for the Stane Street it has *nihil ad rem*.

[2] Lost in the sixteenth century.

habit which will build most readily upon the very absence of proof, and one must refute such falsehood before one can proceed to truth.

Any slight knowledge of intellectual appetites will convince a man that things undiscoverable or only partially discoverable exercise a peculiar fascination over the mind, and that it is where *they* are concerned that assertions become most bold and the passions of controversy most heated.

So it is in the matter of Roman topography, especially in Britain. Since we cannot tell with any certitude from contemporary evidence where the bulk of the roads ran, nor even with what spots a great number, perhaps the majority, of our surviving Roman place-names can be precisely identified, theories upon the line of the Roman roads are plotted out with an amazing assurance. The Roman place-names are identified with quiet security, or what is worse, *the mere lack of evidence is used for the purposes of confident negation.*

It is this last feature, the feature which I have put in italics, which must be especially remarked, for it is the peculiar disease of our time in this province of inquiry.

For instance, we know nothing of London between the time when Imperial Rome still taxed and administered Britain and the seventh century, when, with the return of the Catholic Church, writing and record returned. Wherefore a whole school has risen which will solemnly maintain the fantastical theory that London in the interval did—what?—why, ceased to exist!

No one who has had the good fortune to escape from the influence of the Universities will be ready to believe that they make themselves responsible for so amazing a statement. It is none the less true. Because we do not know what happened to London between one fixed date towards the close of the Roman Imperial system and another fixed date (rather more than two hundred years later) at the beginning of the Dark Ages, therefore it has been solemnly put forward under academic authority that London in the interval disappeared!

It is folly, of course. It is as clear an abandonment of common sense as it would be to deny the existence of our homes during the hours when we happen to be absent from them. Common sense ought to teach men

who propound such fantasies that at any moment in the digging of any new foundation in London or in the building of any new road, a piece of positive evidence may blow their absurdity sky-high.

But an extravagant contradiction of common sense is an actual incentive to the spirit which I am here criticising. And the desire to deny the Roman origins of our civilisation is so violent wherever the tradition of civilisation is felt to be disturbing and inimical to established properties or religious feeling, that mad theories of the sort are not only solemnly propounded at Oxford and Cambridge, but have been erected for a couple of academic generations into a sort of insane orthodoxy.

What has that to do with the silence of the Antonine itinerary upon the Stane Street?

Why, it has this to do with it: That unless we could prove in the most irrefutable manner that the Stane Street does stand today, and is as certainly the work of Imperial Rome, the Universities would certainly deny its existence.

In the matter of a Roman road, their

vagaries are particularly prominent. Until plain relics of Roman occupation are discovered, the Roman origin of some town manifestly and of necessity ancient is not doubted but actually denied. The inevitable crossing-place of a river will not be allowed to be the crossing-place the Roman armies used unless a discovery of coins or what-not proves it. A causeway self-evidently the work of a high civilisation, and with no conceivable authorship posterior to that of the Roman civilisation, will not be allowed to be Roman by these Moderns, unless it conforms to certain rules of construction discoverable in some remaining fragment of documentary evidence and gratuitously laid down by them as universal. Tradition, that sole guide in matters where direct evidence is lacking, is simply ignored. You get men saying that Anderida was no considerable port; that Silchester (with walls as long as Bavai's or Winchester's) was not more than a village; that Roman Britain as a whole, with its active military history and its vast export of grain, was but sparsely populated and insufficiently held.

One must be prepared in establishing the

route of the Stane Street, as in the establishing of any other Roman origin in England, for an abnormal scepticism and for the official denial of any point until an overwhelming accretion of positive evidence is brought up to break the resistance down; and the omission of any mention of the Stane Street in the itinerary would be sufficient to call into question the plain fact that the road is there, and is sufficient to dispute every reconstruction of its more doubtful sections.

Well, the silence of the Antonine Itinerary is of very little importance. Of how little importance we can best understand when we appreciate what the document is.

Stripped of technical language and of the affectation of authority, all we can say of the date of the Itinerary is this: that it was compiled at some time between the reign of Hadrian and that of Constantine, while we may *conjecture* (but cannot prove), that, in the form in which we now have it, it was added to and expanded in the course of those centuries.

Next we must know that the itinerary does not bear the mark of any complete survey. It is whimsical, and perpetually refers to what looks like some individual experience of

travel, and not like a universal scheme. The earliest of the English commentators upon its text, and not the least scholarly, made it out to be a record of Hadrian's journeys, and thus explained its vagaries and its omissions. But in truth we do not know to what accident those vagaries and those omissions are due.

In the absence, then, of any positive evidence, we must turn to the evidence of the road itself and conjecture from analogy the date of its construction.

The inferior and superior dates of that construction are easy to determine. Direct administration from Rome ceased in Britain with the first years of the fifth century, 407–410 A.D. The first years of regular and peaceful administration in which a great Roman work could have been undertaken, correspond to the very end of the first century after the work of Agricola, 85 A.D. Within those 300 years we have the date in which the Stane Street was constructed.

Earlier it cannot have been made. There was no strategical reason for the undertaking of so great a work. The paucity of communications was felt in the North, not in the

South, during the Northern fighting with which Agricola's name is connected; and a military business of this kind, until complete control was established over the island, would have been sheer waste.

Were we dealing with Gaul, the superior date might be extended. It is possible that in Gaul military roads upon the Roman plan were constructed, it is certain that they were repaired, as late as the sixth or seventh century, possibly even in the eighth. But in Britain we can look for no such continuity, at least, near her southern and eastern shores.

If we attempt to conjecture at what moment in those three centuries the great work was undertaken, we are entirely at a loss. All we can put together is this:—

It was a purely military work—that is, it linked up no centres of population nor canalised any stream of commerce. Its sole military value was the connection of all the sheltered creeks and harbours which run from Chichester to Portchester eastward, with London and the crossing of the Thames by a shorter route than the way round by Winchester. The use of these western har-

bours came later than the use of the Straits of Dover as an entry to the country, and was subsidiary to it. They seem particularly important towards the end of the Roman occupation, and it is therefore possible to conjecture very vaguely that the Stane Street more probably belongs to the later rather than the earlier part of those centuries of Roman rule.

If we were to admit the argument of some authorities that the first scheme of Roman roads was connected with a ferry 300 yards east of London Bridge, and if we were further to admit that the Stane Street in its last alignment points towards that ferry, this would give us an earlier rather than a later date for the construction of the road.[1]

But the first contention is doubtful and the second almost certainly false. The alignment from the corner of Juniper Hill across the Wandle points as absolutely at the southern

[1] Such a ferry certainly led to the island fortress of Richborough: such another crossed the Humber. But though the Thames at London was tidal as these waters were, yet it was far narrower than they, and seaborne commerce had no call, as on the Humber and round Thanet, to proceed further: for this among many other reasons given at length on pp. 54–56, I conclude for the Bridge.

end of old London Bridge as any measurement will allow.[1]

If we find it impossible to fix a date save within such very wide limits for the construction of the road, it is still less easy to fix, with the vaguest approximation to accuracy, the moment when the continuity of its use was broken.

Nevertheless the discussion is not without interest. There must have been some one period up to which, in spite of the decline of all civilisation, a man could use the Stane Street in all its length from Chichester to London Bridge. And there must have been some date on and after which that continuity of use was broken.

Now there are several indications to support the conjecture that the disuse of the Stane Street as a continuous road came early in the Dark Ages. Chichester is undoubtedly a city of Roman origin, and, short of some miracle specially worked for the benefit of scepticism, we must believe that it has maintained its life as a town from Roman times to this day. Unless, that is, we are to accept the extraordinary point of view, for which there is no

[1] See measurements in note at the end of the book.

evidence, whether in analogy or in documents, that the pirates who raided Britain from the sea-coast would first destroy a city, then leave it a heap of ruins, and then be at the pains of rebuilding it on exactly the same site, we must believe that Chichester, like every other Roman town which has survived in this island, maintained a continuous life.

Well, when the light of recorded history dawns again upon Britain with the reorganisation of the Church and the preaching of Her doctrines in the south and east of the island, it is remarkable that no record of travel shows us Chichester (or, for that matter, the Sussex sea-plain as a whole) in direct communication with the Thames valley.

That sea-plain has always contained the great bulk of the population. The Weald, though not the impassable forest which it has been made out, was always sparsely inhabited, and always difficult to cross; and the little strip of fertile land between the Downs and the sea must have suffered heavily during the pirate raids, Irish and German, which succeeded the breakdown of Roman power. We know that this strip of country remained pagan for one hundred years after the landing

of St Augustine, and nothing is more remarkable in the early history of the Dark Ages in this country than the isolation of the sea-plain of Sussex. When St. Wilfrid came to preach the Faith to Sussex, though we do not know by what road he came, we read of Sussex in connection with that mission as attached to Wessex on the one hand and to Kent upon the other, with no mention of travel to, or commerce with, the Thames valley. Cadwalla, who lurked in the Weald as an outlaw, fought Kent and later the Isle of Wight, and became king of Wessex, but there is no story of his fighting north towards London. It is true that his story is connected with the Chilterns also, but it is in no way connected with the Lower Thames Valley, and when Cadwalla achieved a general overlordship, it was an overlordship of the south coast of Kent and Wessex and Sussex. Generation after generation throughout the Dark Ages we can follow and find no mention of the use of the Stane Street, nor even any record of a march from which we might infer that use. Nearly one hundred years after Cadwalla and St. Wilfrid, we are able to fix a limit to which the road was still used as a highway south-

OCKLEY GREEN AND THE STANE STREET

ward out of London into Surrey, for in 782 and again in 789 the chronicle tells us of a synod held at Ockley, and seventy years later again, in 851, we have the battle of Ockley, which was fought hard by the Stane Street, a little south of Dorking and upon the eastern slope of Leith Hill.

This battle at Ockley proves the continuity of the use of the Stane Street so late as the middle of the ninth century between London and its site. Any earlier breach of continuity we must conjecture to have taken place further south than that point.

The battle of Ockley, then, though it took place in the Surrey village to which tradition attaches, does not give us a date up to which there was continuous use of the whole Stane Street, from Chichester to London. On the contrary, we may guess from the isolation of Sussex in the seventh century that the Way had been broken to the south long before 700, let alone 851. But as the one historical event certainly connected with the road in the Dark Ages, it merits a brief discussion. The reader will not be surprised to hear that, being the one certain point we have, it has been disputed.

The pirates of the North Sea, pagans generically known in the history of this country as "the Danes," had for a generation and more landed on the shores of Britain in small bands, burning, pillaging, and destroying. In the winter of 850–1 some body of them wintered for the first time on British soil, in Thanet, and with the spring (as we may suppose) of 851 a fleet of 350 vessels came into London river to reinforce them. They stormed the walls of Canterbury and of London. Ethelwulf, the father of Alfred, gathered an army against them. The pirate host had crossed the Thames into Surrey. By which road Ethelwulf and the men of Wessex marched against them we do not know, but the old British way from Winchester by Alton leads to the neighbourhood of the battlefield which was to see the shock between the two forces. In the words of the Anglo-Saxon Chronicle, "King Ethelwulf and his son Ethelbald with the levy of the West Saxons fought against them at Ockley, and there made the greatest slaughter among the heathen host that we have heard tell of to this present day, and there got the victory."

The matter is perfectly plain: therefore it has been doubted.

It has been argued that the battlefield was more likely to be Oakley, near Basingstoke, than the traditional Ockley in Surrey.

The motive of this argument is of course that itch for discovery coupled with a suspicion of tradition which is the bane of modern pedantry. As against the one and only record, a perfectly clear one, and as against the tradition of the Surrey village, the only approach to argument is the spelling of the place-name in the chronicles "Aclea," which might correspond to the place-name "Aclei" in *Doomsday*, while Ockley in Surrey is spelt in *Doomsday* "Hoclie." As against this random guess, you have the fact that Ockley has not only the very powerful argument of tradition in its favour, nor only the presence in its neighbourhood of a huge fortified ring (which the Danish army may not have made, but in which they could have reposed), but the fact that it is at the meeting-place of two main avenues of advance. An army coming up from Wessex by the old prehistoric road, which was in full use for centuries later, would come upon the

Stane Street just opposite Dorking and within an hour or an hour and a half's march of the battlefield, while an army marching south of the Thames, as we are particularly told in the Chronicle the Danes did, to ravage Surrey, would have no ancient way open to them save the Stane Street.[1]

The Stane Street not only goes right through Ockley and the traditional field of the battle, but is more apparent there, has been more thoroughly studied there, and has been in more continuous use there than in any other part of its trajectory. Moreover, the one document—the only one—which gives us the original story at all,[2] distinctly tells us that the fight was in Surrey; that the Danes had been ravishing Surrey before

[1] Mr. Oman, of Oxford, tells us in this connection that Ockley, standing in the clearest bit of Roman road in the kingdom, and the best attested and the most widely known (to the vulgar), is "unlikely" to be the site of the battle, because "it is *far from any road*." (Oman's *England before the Norman Conquest*, p. 425.) The same authority tells us that Arundel is on the Adur (*England before the Norman Conquest*, p. 169).

[2] The Parker MSS. 173, C.C.C.C. In a hand perhaps only thirty years later than the event. The other accounts are later still, and the Peterborough MS. [The Laud MS., Laud Misc. 636, in a hand *three hundred years* later, inverts the order of the land and sea battles.]

it. Oakley near Basingstoke, is not in Surrey at all; it is in Hampshire. Not only is it in Hampshire, but the great Roman road along which we are asked to believe that the Danes marched to this supposed battlefield [1] (it is 2 miles off the Silchester-Winchester road) never goes anywhere near Surrey.

Nor is this all. The Anglo-Saxon Chronicle particularly points out that the Danes "marched *south* over the Thames into Surrey." The road towards Basingstoke keeps *north* of the Thames until it is well past the Surrey boundary.

In a word, this idea that the battle of Ockley did not take place at Ockley but somewhere else, is but one more instance of that search for iconoclastic novelty at the expense of scholarship which is the very disease of dons. It arises partly from vanity, partly from a love of local fame, more from a misconception of what history is and means, and it is a detestable ingredient in modern writing. I

[1] "In a good position for an army covering Wessex for an attack from the north-east." Oman again, and pure guesswork posing as history. There is no mention in the original of any attack from the north-east. The attack was by the West Saxons on the Danes from the south-west. (*England before the Conquest*, loc. cit.)

am glad to have exposed here a conspicuous example of its charlatanry and folly.

Ockley, then, we may safely take to be a limit up to which the Stane Street was certainly used in the ninth century. There is mention of one other point in the Dark Ages between Ockley and London, and that is Merton, where Cynewulf was killed in 786.[1]

Of positive evidence beside these points we have none, and they seem between them to lead to some such conclusion as this :—

The Stane Street remained in continuous use right on through the Dark Ages, and perhaps until near their close, from London to that point beyond the shoulder of Leith Hill where the unfertile waste of the High Weald with its deep clay, bad water, and thickets begins. There, if we may judge by the absence of buildings or remains of buildings, of monastic establishments, and of all historical record, by the presence of the county boundary between Surrey and Sussex, and by the long isolation of the latter county, the

[1] 786? 786 upon the theory that *all* dates in this part of the Chronicle are, like the death of Charlemagne (by far the best datum point), antedated two years by erroneous copying. The MSS. of the Chronicles give 784.

first break in the road occurred. Very possibly this was due to the ruin of the bridge over Arun at Alfoldean, a little further south. Whenever this occurred, to proceed further south along the Stane Street would have led one nowhere; and it must further be remarked that the gap between the road still in use near Ockley and Alfoldean Bridge is the worst bit of soil and heaviest going in all the passage of the Stane Street through the Weald.[1]

From Alfoldean Bridge south to Pulborough it must have remained in some sort of continuous use, if only to link up isolated farms; while in the southern part of this stretch it continuously united two groups of population —Billingshurst and Pulborough—and formed for most of its length the road to another old inhabited site (of whose origin, however, we know nothing)—Horsham. South of Pulborough was again a break, due presumably once more to the breach of communications over a river and a marsh, the breakdown, that is, of a bridge and a causeway.

[1] It must be remembered, however, that a track survives —all signs of metalling lost on the surface—and is marked continuous as late as 1725 (Bowles' Map).

This gap was a serious one, since it took all the meaning out of the road from Chichester over the Downs. With the breakdown of the road in this gap, the Stane Street would be used from Chichester so long as it served the sea-plain—that is, up to Halnecker Hill, in its neighbourhood—but after that its passage over the uninhabited Downs led nowhere.

When the roadways were linked up again by the recovery of civilisation, the Stane Street was not recovered in its entirety. Those great deflections took place in it which will be the matter of my next section, and which so largely correspond to the gaps I have here noted.

Of further history in connection with the Stane Street there is none. The Conquest certainly found a monastic establishment at Boxgrove, and probably found one at Hardham. The new Norman civilisation also found (and largely expanded) the establishment at Merton; but of battles, synods, or civic gatherings, still more of commerce proceeding along the road, or of any form of human communication using it for great purposes capable of leaving historical record, there is no trace.

V

THE MODERN DIVERGENCES

When I speak of the "divergences" of modern roads from the Stane Street, I must not be understood to mean the slight deflections of a few yards produced in the course of 1500 years from the original direct line of a Roman road which is still in use. Such deflections are notable in the Watling Street, for instance, and have an interest of their own. They are to be found throughout Western Europe upon the line of every surviving Roman road wherever such a road runs.

The "divergences" I speak of in connection with the Stane Street are of far greater interest and importance.

The Stane Street ceased to be a continuous means of communication between Chichester and London at a date which, although, as we have seen, it cannot be precisely estab-

lished, was certainly so early that *any prominent example of divergence in its course, is an important indication of the influences which moulded travel in the Dark Ages;* for the divergences from the Stane Street are concerned only with the disjointed fragments of the road, as those fragments were left after its continuous use was interrupted, and after it had sunk into a series of isolated links connecting, not London and the sea-coast, but neighbouring points in any one countryside. On this account the forces tending to replace the old Roman line by new ways had the fullest scope. The new tracks were not tied to a trajectory in constant and uninterrupted use and though they originated in the Stane Street, the most excentric very largely differ from its course.

I say the divergences apparent on such a broken-down Roman road are of the highest historical interest; and for this reason, that they provide one of these links which ill-informed or unobservant men believe (in the lack of written record) to be lacking between Roman and medieval times in Britain.

It is frequently remarked, especially by modern writers, that the streets of our cities and the lanes and roads of our countrysides so little correspond with the old Roman lines, as to prove a complete devastation of Britain by the pagan pirate raiders of the fifth century and the destruction of Roman culture at a blow. The thesis till recently popular in the universities was that of a conquest of all Eastern Britain by the Saxon pirates, and the extermination of the population. That thesis has been sufficiently exploded. The material argument drawn from the post-Roman course of roads and streets was, in particular, an example of that lack of general culture which is the bane of our universities; for a little intelligent travel, a little observation of Paris or of Orleans, of Arles, of Lyons, or of Rome itself, should have been enough to disprove it. In all those towns a similar lack of correspondence between modern and ancient streets is apparent. But even with general culture lacking, a view of this island is sufficient to disprove such follies as the idea of a pirate "conquest," and the particular case of the Stane Street clearly discovers the manner

in which the modern system of highways developed out of the Roman model.

The more one studies the particular nature of the places where the post-Roman roads diverge from the track of the Stane Street, the more evident does it become that this divergence was a gradual and natural affair, consequent upon the decline of civilisation, and not upon its sudden destruction by the barbarians. For one thing, the proportion of the Stane Street which is and has been used as a highway, is considerable. If we count only that part of it which is undisputed, and follow it only from the East Gate of Chichester to Warren's Barn, near Epsom Downs (where it is lost), we find that of a total distance of 41 miles, 20 miles are metalled highway to-day, and quite 10 miles more are lanes in constant use. If we count that part which has been, within historical memory, used as a road, green or hard, the proportion is extended from three-quarters to nearer four-fifths. It must include the way up Halnacker Hill and down again on its southern side, the succeeding portion between Seabeach and the Ertham road, and all that part which begins at Gumber Corner and descends the

escarpment of the Downs above Coldharbour, for this is still used as a green road.[1]

The stretch of 2 miles between the Eartham road and Gumber Corner, overgrown as it is with the Nore Wood, cannot be counted as a road in use; but with that exception, one may say that all the 10 miles from the East Gate of Chichester to the foot of the Downs remained in continuous use for centuries, and very much the most of it remains so still.

From Pulborough Bridge the whole of the Stane Street has remained in use continuously, whether as a metalled road or a trackway, as far as Alfoldean Bridge, and is so used still. Much of it has always been used as a hard way, and early in the nineteenth century the whole of it was at last metalled from one crossing of the Arun to the other. It is true that the short $\frac{3}{4}$ mile from Alfoldean Bridge to Rowhook, though it is covered by a track, does not find that track in exact correspondence with the Roman road. The way goes now to one side, now to the other, of the embankment, and only here and there precisely corresponds with it. The same is

[1] For this and all that follows, see general map at end of volume.

true after Rowhook as far as Monk's Farm, but during the whole of this stretch of $1\frac{3}{4}$ mile there are not 50 yards continuously which do not either preserve the right-of-way or are not used by some track. After Monk's Farm it enters again into continuous use until we come to the smithy below Oakwood Hill; thence it proceeds $\frac{3}{8}$ of a mile, through the greater part of which no right-of-way has been preserved, and where continuous travel has deflected from the road, though we shall see in the description of the road at this point a very good explanation for this deflection. But the $\frac{3}{8}$ of a mile over and the stream crossed, we have the road in continuous use again, and for centuries used as a hard way. To-day it is metalled throughout for 3 miles, until its use ceases again at Buckinghill Farm.

From this last point—Buckinghill Farm—to Burford Bridge is the longest continuous stretch over which the road fell out of use in the Weald and north of it. It is, as the crow flies, just over $6\frac{1}{4}$ miles, and along the line of the road itself somewhat over $6\frac{1}{2}$.

Burford Bridge and its crossing have always been in continuous use; but we have no proof of

a continuous use upon the right bank of the Mole until, at a point a full mile and a half north and east of Burford Bridge, the lane reappears in general use as we leave Mickleham Woods and come to the open country of the Leatherhead Downs. From that point for 2 miles its continuous use is certain.

The Stane Street, then, though it ceased in the Dark or perhaps early Middle Ages, to afford an unbroken approach from London to the Sussex sea-plain, will afford, in the various isolated sections into which it fell, as good an example of the causes and nature of "Divergence," as good a paradigm of the gradual and connected succession from Roman to mediæval things as you will find in Europe.

For when we come to examine each section in which post-Roman usage has abandoned the road, so far from finding a scheme which presupposes an abrupt disuse of the Stane Street, each such divergence can be clearly accounted for by the changing necessities of travel in a time of declining civilisation, and on the analogy of similar divergences upon the Continent and in other parts of Britain. We can be certain that there was

no *sudden* cessation of the Roman use, but only a gradual one.

It concerns us, then, to establish at the outset of our examination what causes they were which led to these gradual divergences from the fixed Roman line which developed from it our present scheme of roads.

These causes are three in number.

First, the gradual breakdown of the surface, with the consequent necessity men were under of picking their way, especially in bad going (as on clayey land), by a devious succession of drier strips which led them off the artificial causeway.

Secondly, the total breach of continuity which occurred where a bridge had broken down or a causeway over a marsh had been swallowed up; to which must be added the cessation, as civilisation lowered and central government disappeared, of any necessity for rapid and continuous travel between distant points.

Thirdly, the encroachments which private interests made upon the public way as the instrument of central administration, designed to curb men locally powerful, was lost.

So long as the way was kept up, it formed,

as it was designed to form, the most direct line of communication between one point and another. As such it would be followed for its superior surface even when civilisation declined, save in one exceptional particular, which must have come early, and is as follows :—

Travel would tend to abandon the very steepest of the gradients which a Roman road effected in crossing a ravine or breasting an abrupt hillside; for though wheeled traffic declined and was largely replaced by water-carriage for heavy material, and though inland communication was largely replaced by pack-horses and voyaging upon foot, many great loads still depended upon wheels. When the chariot was forgotten and all postal service had ceased, a heavy load (especially as the surface of the direct road began to degrade) would tend to descend and ascend by gentler gradients, longer than and divergent from the old straight line. The new track would go round the base of a steep hill or curve in a deep "U" to negotiate a valley. Perhaps the best out of numerous examples is that of the Radstock Valley, on the Fosse Way.

Next, when the first divergences at steep gradients were established, the gradual decay of the road surface would produce another type. Society from the fifth century grew ill-content to maintain the energy and, above all, to pay the taxes which the high civilisation of Rome involved. It was not content, therefore, to keep up the great Imperial ways, and their progressive degradation produced a second set of divergences.

The form such divergences took was the leaving of the strict line of the way and the following of it to one side, to the right or to the left. When the good surface on the summit of the raised ridge was broken up, travel along that ridge ran the risk of accident. Wheeled vehicles might topple from the bank, and it was safer to follow along the level at its foot. Of this there are innumerable examples all over England and the Continent, where we see a modern lane or road still following closely the line of a Roman road, but, instead of being absolutely identical with it, having the ridge of that road running upon one side or the other in the shape of a bank often surmounted by a hedge and used as a boundary.

But this would only occur where the local soil was fairly hard and dry. Elsewhere traffic would tend more and more to pick out for itself the most convenient natural course, from dry patch to dry patch, in a circuitous abandonment of the road, which it would rejoin again wherever its next section of maintained pavement began, the degraded sections thus forming a chord to the arc of divergence which would tend to disappear under the plough in cultivated countries.

It is evident that examples of such divergence would be more numerous on a clay soil like that of the Sussex Weald than, say, on a dry and hard soil such as chalk or sand.

Such was the second form of divergence consequent upon the decline of the Imperial power to gather taxes and to maintain its military roads.

There was a third form.

This last form of divergence was due to absolute breaks in the continuity of the road. These breaks would most probably occur at the passage of rivers or marshes, and their effect was to make each section of the road thus isolated lead nowhere, and in the neighbourhood of such points a road already

divergent would lead right away from the line of the Roman road and seek a passage by some distant point. We have a good example of this on the Stane Street in the Horsham Road leading off from Five Oaks Green. When the bridge at Alfoldean was broken, the section between Five Oaks Green and the Arun led only to small and isolated steadings and farms. The branch road leading to so considerable an agglomeration as Horsham became far more important at the expense of the old Roman way.

With this cause is intimately associated the cessation of all necessity for general and rapid communication from one distant point to another, which of course accompanied the decline of material civilisation and the loss of power on the part of the central Government. The continual travel—military, ecclesiastical and civil—which the first four centuries demanded between two such points as Chichester and London, the continual passage to and fro of officials and of troops from distant town to distant town, disappeared with the disappearance of the organised Imperial power. Society sank into a number of self-contained and self-sufficient country-

sides. To get from the chief market of these to the various villages was a necessity; but only along the very largest arteries of European travel (such as the Watling Street) was it still necessary, after the breakdown of the central Government, to proceed continuously and in large numbers from, say, London to a port, or from one bishopric to the next.

Again, a place upon a Roman road occasionally (though rarely) declined in relative importance, or even disappeared in the course of the Dark Ages; and off the line of the road (though that was still less frequent) what had been a village with the Romans might grow into a town. When this form of desuetude occurred, divergence would take the shape of an "elbow" or "V," the later road leaving the Roman road in order to visit the new centre of habitation, and the old Roman road along the base of the "V" falling into ruin.[1]

Of this form of divergence there is no example upon the Stane Street, but a cognate

[1] There are several examples of this in Northern Gaul and in Britain, of which, perhaps, the most striking is that of Castre a few miles south-west of Brussels, where the "elbow" or "V" was actually formed before the repairing of the Roman roads was abandoned.

form is very common, which is the linking-up of a line of villages somewhat off the road, which villages were insignificant in Imperial times compared with the great traffic of an Imperial artery, but communication between which in the Dark Ages was more important than the use of an Imperial highway. That Imperial highway was no longer of general service because the two distant points which it connected were no longer in administrative touch one with the other: a loop line going up villages just off the Roman road took its place.

The last cause of divergence was encroachment. No private man, however locally powerful, could interfere with public necessity so long as the Roman order remained intact. When it collapsed, men locally powerful began in every form to annex what had been of public right, and, in sparsely inhabited districts it needed no great wealth or influence to do this. Even an isolated farm might, for its convenience, divert traffic off some portion of a road which its owner had seen fit to enclose.

With these main causes in mind, we may examine the divergences developed from the

THE RUINED MILL, HALNACKER DOWN
(THE "SEA PLAIN" BELOW)

line of the Stane Street, beginning at the Chichester end.

To take them in order :—

First we have the "elbow" at Westhampnett. The cause of this I have found it impossible to discover, but its shape suggests encroachment.

Next we have the post-Roman road abandoning the Roman line at the foot of Halnacker Hill and rejoining it a mile further on. The cause of this divergence is self-evident from a glance at the contours, and especially clear upon an examination of the spot. Halnacker Hill is abrupt and steep, with simple parallel contours. To go over the shoulder of it was part of the scheme of a military road engineered upon straight lines. But the moment the surface of the road fell into decay, heavy wheeled traffic would of necessity have followed round the base of the hill. It involved less than 300 yards of divergence from the straight line—to which local traffic was naturally indifferent—and about 150 of extra total distance. Exactly the same factor was present in the crossing of that eminence known as Long Down, and it was natural that as the surface of the old road grew

more and more difficult, the new one should tend to follow the easier contours along the side of the slope. But here the first serious loss of the Stane Street as a continuous mode of travel appears. Of the next mile and a half, one full mile is overgrown with the great Nore Wood.[1] The London road drifts further and further away from the dead-straight of the Roman line, makes for the valley of Upwaltham, and down Duncton Hill to Petworth.

Why was this? Why was the road abandoned at this point?

The answer to this question is to be discovered in the nature of the use to which the Roman road was put when the central Government of Britain failed. Its use, as I have said, became a local one. With every decade the clay Weald, always sparsely inhabited (and sparsely inhabited to this day), ill-watered, tending to continual rough overgrowth, and, though fertile, arable only under conditions of a fairly developed civilisation, formed, not indeed a barrier, but a belt of land more and more neglected, through which there was no temptation for the Northerner to

[1] Miscalled upon the Ordnance Map, the "North Wood."

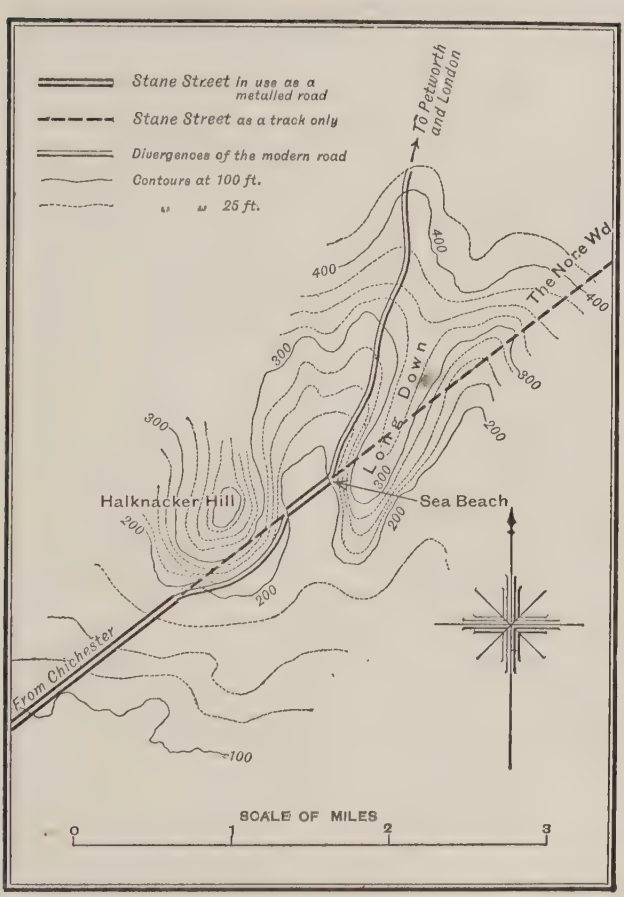

Stane Street in use as a metalled road
Stane Street as a track only
Divergences of the modern road
Contours at 100 ft.
" " 25 ft.
To Petworth and London
The Nore Wd
Lord's Down
Halknacker Hill
Sea Beach
From Chichester
400
300
200
100
SCALE OF MILES
0
2
3

FIG. 15.

travel south, or for the inhabitants of the southern coast to seek the Thames valley. The business of Chichester in the Dark Ages was to seek Petworth or to seek Arundel. The Stane Street, rising right over the Downs, led nowhere; it led to no market which the cultivators of the sea-plain need seek, nor to any seat of government with which they were concerned. Arundel (a fortress of the Dark Ages, a place with some vestiges of Roman material in its neighbourhood, an obvious crossing of the river, a traditional port, and therefore presumably *Roman*) lay quite off this track, and there must in any case have been a road to it through so fertile a district.[1] To reach Petworth the obvious track for droves and men was to follow the great funnel made by Upwaltham Combe, across the low pass above Lavington, and then to pick one's way down, sidling across the escarpment of the Downs by Duncton Hill.

The Roman road was indeed locally used and still is, from Gumber over the Downs to the parish of Bignor, but this use formed no

[1] Moreover, the discoveries of graves at Westergate and Avisford confirm our common sense in the matter.

part of any general travel: it was purely parochial.

I have said that between Bignor and the bridge at Pulborough—that is, between the foot of the Downs and the first crossing of the Arun—the Stane Street is altogether abandoned by post-Roman lanes; but I have further said that an examination of the map and a knowledge of the locality tells one that it was abandoned naturally and gradually, and not simply forgotten.

The road ceases to correspond with any modern lane just where it enters Grevatt's Wood. There is a point not quite half a mile further on, where it again corresponds with the modern road.

Why did the lane make the detour it does to the right to get around to this point?

Because in the field just to the east of Grevatt's Wood (and on a spot just above the 100-foot contour there) breaks out one of those springs which mark the junction of the chalk and the clay. This spring runs down northward to the mill brook below, and renders all that part of the field between it and the further field upon the brook side marshy. This difficulty was overcome by the

building of a culvert in Roman times, which kept the line of the way drained. But when the road was no longer kept up and

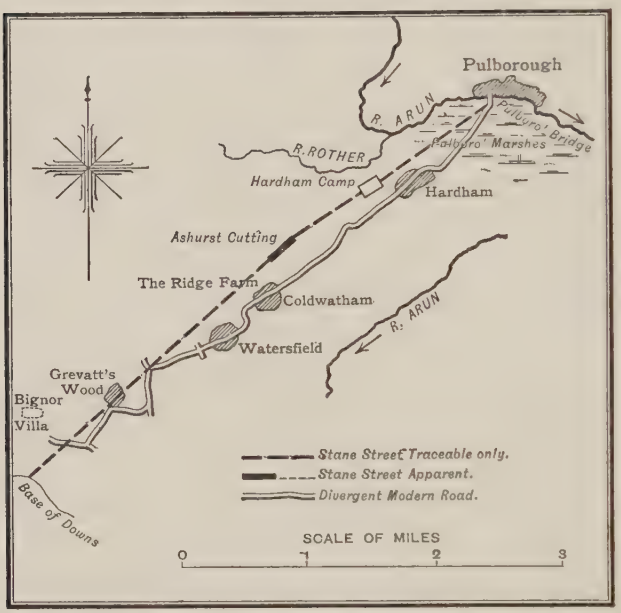


Fig. 16.

the culvert became choked, the line of the highway did but add to the difficulties of of the place. The downward flow of the water upon this northern slope was checked by the ridge of the Stane Street and the

swamp rendered worse than ever. The local lanes therefore picked their way round to the right over drier ground, and that drier ground only touched the line of the Stane Street again upon the further side of the brook where the rising bank afforded good drainage.

From this point the modern road to Pulborough will be seen following a course more or less parallel to the Stane Street; but never exactly corresponding to it. Save where it actually converges with the Stane Street at Pulborough Bridge, its nearest point is at the bend of the road at Hardham, where it is more than 140 yards away from it. Its furthest point of divergence is just beyond the Congregational Chapel of Watersfield, where the bend in the road is exactly 480 yards from the line of the Stane Street.

In all this piece between Grevatt's Wood and the Marsh and Pulborough there would not, on a first glance at the map alone, appear a reason for the gradual divergence of travel from the Stane Street. But this is due to the fact that the English Ordnance does not give contours sufficiently close to show the complexity of this piece of land. It is all a

tumble of small, isolated, steep knolls which can best be negotiated, if one has not a properly engineered road to help one, by following the track now actually followed by the highroad; that is, by curving round southward so as to miss the high land of the Ridge Farm and to cross the 100-foot contour above Watersfield. After that one can only avoid the sharp rock of Lodgehill by taking one's way to the south of it, and one misses the steep and difficult ridge of Ashurst by passing down to the south and east by Coldwaltham. Moreover, in the gradual decay of good communications, the river here, as throughout Northern and Western Europe, took the place of the road, and these two villages, Watersfield and Coldwaltham, probably much older than the Roman occupation, but at any rate natural sites for habitation, with good water, upon a dry soil, and to the sunward side of the little hills, would be dependent for such communications as they needed upon the Arun river, which flows beyond their water meadows from a quarter to half a mile away.

When local travel superseded national, it can easily be understood how the track

leading naturally to one of these ancient villages and then pursuing the southern side of the slope to the next, would supersede an Imperial road which neglected them both. At Hardham, however, there was no geographical reason why the road should not have converged upon the old Roman way. Its line is tending to do so when, at the point I have mentioned above where it is not more than 140 yards distant, it veers off to the right. This divergence can hardly be due to the presence of Hardham Priory. The priory, as I have said, is an example of those numerous early foundations which sprang up everywhere along the line of the Roman roads. The actual site chosen for the main building lay upon the river side of the Roman camp and hard way. Such a site put the monks on the dry side of the small hill which stands here, and gave the community easy access to water-carriage and to the pastures. One would therefore expect the track most commonly followed after the building of the priory to veer towards it, and not to converge until later with the Stane Street. But though this accounts for the track taken by the modern road to the

point where it is nearest the Stane Street (about 300 yards west of Hardham church), the only explanation of its sheering off again to reach Pulborough Bridge by the modern causeway and its abandonment of the old Roman made way across the marsh to the Arun, lies in the gradual disappearance of the made way.

Throughout England, with very few exceptions, wherever a Roman road crosses marshy ground on approaching the passage of a river, its line is lost: the weight of its structure has gradually sunk into the soft soil, and in the absence of repairs it has at last been engulfed. In such cases the post-Roman road picks its way as the track of animals or local experience may direct it, along whatever line of the marsh furnishes it with the driest going.[1] In such cases the

[1] Examples of this may be found at Stratton on the upper waters of the Cole near Swindon, at Cricklade, at Newbury (where the Cirencester-Silchester road negotiates the Kennet), at the crossing of the Blackwater some miles east of Silchester, at Porton on the Bourne east of Old Sarum, and at Avon Bridge west of it, at Bransbury Common (where the Winchester-Cirencester road crosses the Test river), at Romford and again at Mountnessing on the Great Eastern Road from London to Colchester, at Bidford on the Warwickshire Avon, at Water Stratford on the

post-Roman track very often recovers the line of the old pre-Roman track across the valley, and the modern road not infrequently is to be found following straight upon the old engineered line of the Empire until it strikes the soft ground, crossing this soft ground and the stream by a winding path, and upon the further side when dry ground is again recovered, recovering its identity with the Roman way.

In this question of the Pulborough marsh, the observer must not be deceived by the line of the present causeway: that of course is modern and has been engineered under the conditions of a civilisation as high as that of the Romans. We must imagine that the Roman causeway, starting rather less than 200 yards to the east of the modern road, and making for Pulborough Bridge, was gradually lost; sinking here and there into the softer places, less and less frequently repaired, forming at first a few patches of isolated hardway which later became useless as the marsh gained upon them, and at last

Bedfordshire Ouse, &c. &c.—these are but a few out of many examples. On the other hand, both Fenny Stratford and Stony Stratford are notable exceptions to the rule.

wholly disappearing beneath the soft soil and under the recurrent floods of the river.

Meanwhile from the plateau upon which Hardham Priory stood, to the southern end of Pulborough Bridge, a track picking its way from one harder patch of the marsh to another, rudely metalled in the worst of the intervening stretches, used perhaps only or chiefly in the drier months, superseded the older means of communication, which, as they fell into ruin, the men of the Dark and early Middle Ages had not the skill to repair upon that considerable scale which would alone be of service for the preservation of such a monument.

All the next 12 miles of road from Pulborough Bridge to the second crossing of the Arun beyond Alfoldean Bridge or Roman's Corner, is a good modern road, metalled; and it has always been in continuous use even before the northern part of it was hardened.

This part of the road from Pulborough to Alfoldean Bridge has suffered no appreciable divergence in all the centuries of its existence save very slight ones, which can only have proceeded from the encroachments of private

properties, and these, as might be expected, are nowhere conspicuous save at and round Billingshurst, a centre of continuous habitation.

This section of the road was only used for communication between Pulborough and the villages to the north of it. As far as Five Oaks Green, it was and is the regular Horsham road. Beyond Five Oaks Green it was still useful for serving Slinfold and the agricultural district around it. Beyond Slinfold it survived as a green lane up to Alfoldean Bridge without divergence.

It must of course be premised, in connection with this section, that the dead straight line which the original Roman way presented, though clearly apparent upon a map, is not equally apparent during the course of travel along the modern turnpike.

The modern turnpike has slight sinuosities in any such stretch of a Roman road which it follows, and these are exaggerated to the eye as one looks along the length of it at any point. They are not, properly speaking, divergences at all. They are but consequences of two combined causes which slightly affected the course along which metalling was laid

down when the modern turnpikes were made. These two causes are as follows :—

First, it was customary throughout England to leave a wide space upon either side of any old Roman way, in order to provide alternative tracks for the heavy wagons which cut up the soil in wet weather, and especially upon clay. When the left-hand side of such a belt had been turned into a morass by too frequent passage over it, it was given a rest and traffic went to the right. One can see the process going on now in any one of the broad green lanes remaining to us.

Secondly, a Roman road being, as a rule, raised above the surrounding country by a few feet, it was, as we have seen, exceedingly inconvenient to travel along it, wherever its surface had fallen out of repair. Traffic, therefore, would take to the belt upon either side of such a break, and this accounts for the fact already mentioned that along all the Roman roads of Britain and Gaul the actual narrow line of the original way is often found skirting the modern road just to the right or to the left of it.

These two causes combined established in any one summer a track more used than

the rest in the broad belt, which track could not always be upon the dead straight, and when metalling was undertaken in modern times, when many of the roadside spaces were simultaneously enclosed, the hard surface would follow a narrow strip corresponding to the most used and beaten part of that belt.

At the point called Roman's Gate, about 100 yards north of the river-crossing at Alfoldean Bridge, the hard metalled road stops abruptly where it falls into the main road from Horsham to Godalming, but it cannot be said that post-Roman lanes and tracks here neglect the Stane Street or are any evidence of its abrupt abandonment. There is here no true "divergence." There is rather, as we saw between Halnacker and Bignor at the crossing of the South Downs, that rare thing, a breach in the use of a Roman road.

We are approaching the wildest part of the Weald: there were no villages or any considerable steadings from one to the other of which roads should lead: nothing but a few rough paths through the undergrowth and over the clay, and, short of constant travel between the Thames valley and the sea-coast

(which had of course ceased), we cannot in this portion of the road expect the use of it as a great highway.

It was evidently used, however, as much as any other local tracks for proceeding from one solitary farm to another. It is marked as a road in the maps of the early eighteenth century well beyond Roman's Gate—though not quite to Ockley—but the lanes in this neighbourhood have not sprung from the old highway. They have arisen independently of it.

Beyond the Chequer's Inn at Rowhook it crosses one after the other two steep gills[1] —White's Gill and Honeylane Gill. Another track, therefore, runs parallel to it, on the west and close by, to avoid these ravines. Until quite lately neither this nor any other neighbouring track was used as a hard road, and the Stane Street, in continuous local use, was no more abandoned than any other petty local way. It proceeds, always in some use, beyond the county boundary (which corresponds of course with the very depth of this deserted and lonely belt), has been recently hardened to form an approach to Ruckman's

[1] Or "ghylls," which is Sussex for a ravine and its stream.

Farm (just upon the Surrey side of the Shire mark), and so runs hardened for about a

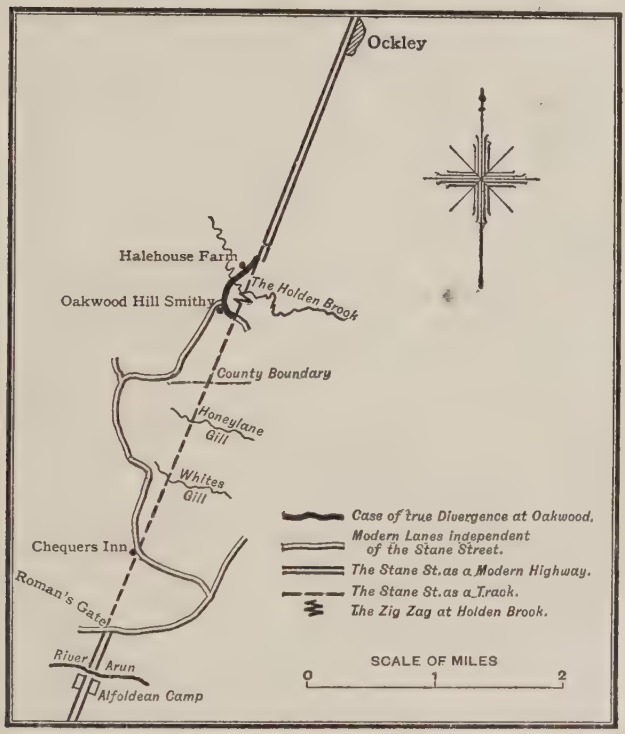


FIG. 17.

quarter of a mile until it strikes the local lane running from Oakwood Hill eastward

N

to the main Ockley road. At this point there is true local divergence amounting to less than half a mile. The Stane Street is abandoned by the later track which runs westward round by Oakwood Hill Smithy, crosses the Holden Brook by a bridge just south of Halehouse Farm, and does not rejoin the Stane Street for another 400 yards.

The cause of this local divergence is clearly apparent as one follows the old straight line of the Roman road. This line, as it approaches Holden Brook, comes to a steep bank, now wooded, down which the approach to the stream is difficult. Here, as in the other similar cases we have noted, the tendency of travel when once the good surface of the road had degraded, would be to seek some easier slope for the wheeled traffic by which it might cross from bank to bank, and such a slope is afforded by the post-Roman lane with its crossing below Halehouse Farm. From where this lane falls in to the line of the Stane Street at a point precisely 300 yards east by a trifle north of Halehouse Farm, right on to Buckinghill Farm on the far side of Ockley, the road has been and is in continuous use.

From that point, or rather from the gate

leading up to Buckinghill Farm, where the modern lane makes an abrupt turning to the east to leave the Stane Street, we have a long stretch of 3¼ miles, throughout the whole of which the modern road from Ockley to London, soon merging with the modern road from the Weald through Dorking to London, diverges right away to the east and is distant at its furthest point (which is the smithy at Beare Green) by a full mile from the line of the Stane Street. From this point it slowly tends to rejoin the line of the Stane Street again, though, as we shall see in a moment, it does not actually do so.

What is the cause of this divergence of the modern from the ancient road, the most considerable divergence which we find in the whole of its course?

The cause is to be found in the great height to which the Stane Street here rises. This is that point in its course where it bends over the shoulder of Leith Hill, and where, as I have described upon a previous page, a "sight" was taken from the height of the South Downs. The point of flexion where the direct drive of the road from Pulborough north and east turns slightly westward, is on

a level with the great camp of Anstiebury, and half a mile to the east of that stronghold the curve (which here as on the escarpment of the South Downs gives to a locality within the elbow the name of "Coldharbour") is situated on the field south of Anstie Grange Farm where the Stane Street crosses a little rill, and the highest point of its passage over this shoulder of the green sand is found exactly three-quarters of a mile further on, where it passes through a narrow copse about 300 yards west of Folly Farm. The road here only just misses the height of 500 feet.

Now, there was no reason why travel, when once the good surface of the engineered road was impaired, should follow this high and steep line. It was far easier to diverge round the base of the hill, and this is what the post-Roman road did, reaching at its highest point (that is, abreast of the highest point of the Stane Street) no greater height than 372 feet.[1] From this point the post-Roman track makes again to recover the line of the Stane Street, and where it crosses the 300-foot contour 100 yards or so beyond Holmwood Smithy, comes

1 Just outside the property upon the south side of Holmwood known as Oakdale.

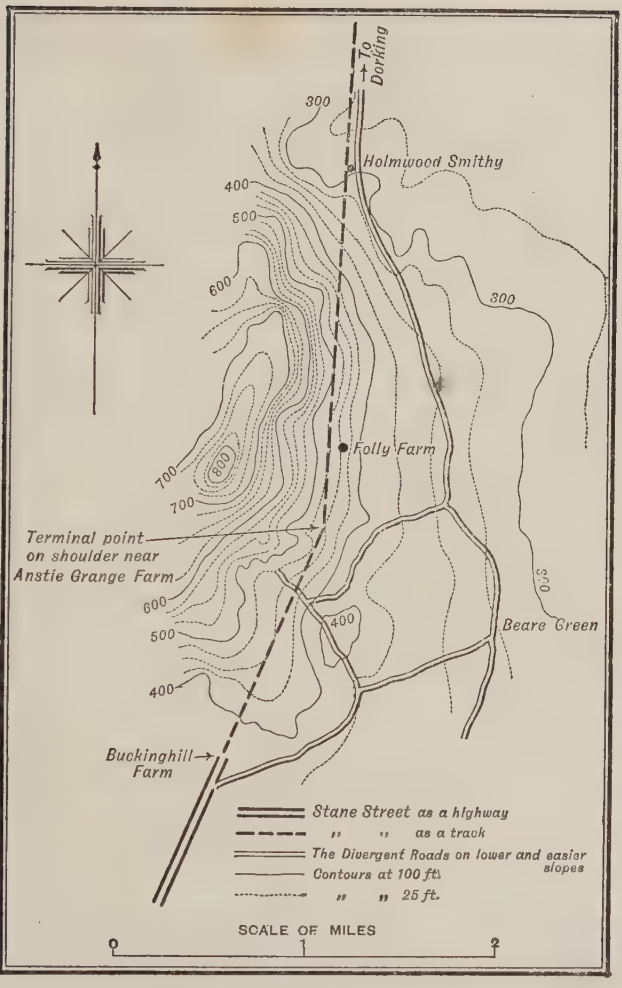

To Dorking
300
Holmwood Smithy
400
500
600
300
Folly Farm
700
800
700
Terminal point on shoulder near Anstie Grange Farm
600
500
400
400
Beare Green
Buckinghill Farm
Stane Street as a highway
" " as a track
The Divergent Roads on lower and easier slopes
Contours at 100 ft.
" " 25 ft.
SCALE OF MILES
0
1
2

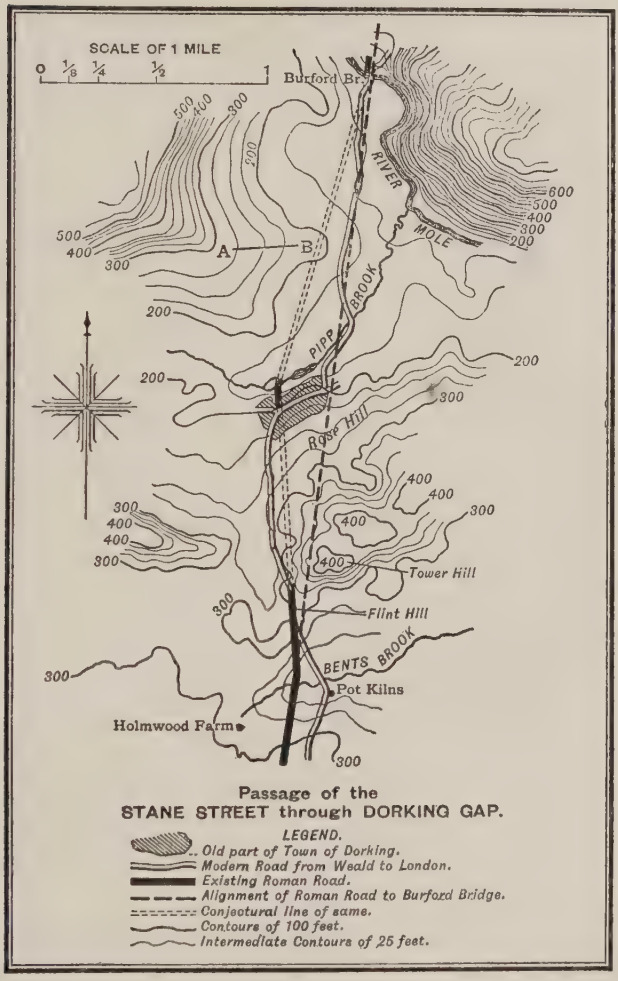
FIG. 18.

so very near to doing so that we must imagine the two to have converged in former times. There is not 200 feet between them ; but just at that point occurs a new divergence for the purpose of crossing Bent's Brook, which I will now describe.[1]

Instead of following the line of the Roman road right across the valley from Holmwood to Dorking, the modern road gradually diverges to the east until, at the point called Pot Kilns Cottages, where the post office is, it is no less than 200 yards off the road.

This divergence has an obvious cause for anyone who has picked his way across unmade country. The cause is a little stream of water known as Bent's Brook. It is a very small obstacle in the eye of the modern traveller upon good made roads ; but if he will leave that artificial advantage and attempt to cross the valley by the fields, he will soon find why upon the breakdown of the surface of the Stane Street the men of the Dark Ages took this divergent line. The crossing of

[1] All that part of the road which runs from Horsham to Dorking was not *hardened* till 1755, when it was made by Act of Parliament (28 Geo. II. cap. 45), but a track was there.



Passage of the STANE STREET through DORKING GAP.

Bent's Brook 200 yards down from the line of the Stane Street was the only place where a patch of hard land occurred upon its clayey banks. The later track might indeed have avoided the Bent's Brook altogether by going to the west above its source, but if it had done this (passing behind Holmwood Farm), it would have had to climb, and travel naturally preferred not to do that.

Just beyond the sandpit at the entry into Dorking, and at the rise known as Flint Hill, this divergent track rejoins the Stane Street and uses the cutting which that old way made through the sandstone here, coinciding with the Roman road for the next 600 yards, past the road leading up to Tower Hill. Then there is another divergence, this time to the east: the line of the Stane Street running straight in front of the Workhouse and making for the end of the High Street, where the West Street falls in. This line involved a sharp switchback up and down over the tumbled land at the foot of Rose Hill; the modern road slightly diverges in order to avoid the gradients.

From that point at the end of the High Street (where the three main streets of Dork-

THE VALE OF DORKING FROM BOX HILL

ing meet) to Burford Bridge, is a distance of 1 mile and rather more than 5 furlongs. Though the Stane Street is lost under this stretch of arable land, we may presume it, from arguments adduced in another section of this book, to have gone straight, whereas the modern road diverges considerably to the east, being at its furthest point from the Stane Street, where it crosses the Pipp Brook, a divergence of 400 yards. From that point it gradually reapproaches the Stane Street, which it meets again opposite the Lodge of Burford Lodge, where the road comes in from Box Hill Station.

The cause of divergence here is as clear as in the other cases. It was caused by the seeking out of the best crossing of a water obstacle when the artificial crossing upon the straight line of the Stane Street has broken down. The modern road crosses the Pipp Brook just where its bank is hardest. The Stane Street had crossed it upon a flat where it is most marshy. This divergence had the further advantage of avoiding the spur of land A B which stands above the modern road to the west opposite the Brighton and South Coast Station.

From the crossing at Burford Bridge to the crossing of the Wandle, the divergence of the road is conspicuous and the loss of it in the northern part of this section remarkable; it is a true divergence none the less, and the loss, though not explicable, is paralleled by many instances of the same sort throughout Europe. The modern road as far as Juniper Hall does not exactly correspond with the Roman way, but everywhere closely follows it, and is only not identical with it, because (1) the present bridge was built a few yards east of the old crossing, and (2) the saving of a very steep gradient, especially by the artifice of cutting, necessitated this slight difference.

But from Juniper Hall northwards the reason of the divergence was different. It was due to the fact that the straight line of the road up over Leatherhead Downs had no object but the original military object of reaching London in the most immediate fashion.

Now, when that military object ceased, men's slower and more local travel was concerned with linking up the string of human habitations near, but not on the road; and this string of human habitations lay near but not

on the road for the simple reason that the road, passing as it did over the high chalk uplands, lacked water. Therefore, whatever original tracks took a man from Burford Bridge to Leatherhead, from Leatherhead to Ashtead, Ashtead to Epsom, Epsom to Ewell, and so forth, would become the only continuous stream of traffic in the Dark Ages. There was no need to seek the line of the road again until the crossing of the Wandle had to be negotiated, and there, so near London upon what had continuously been the royal villa, the communication across the stream was kept up and used.

In these many miles of divergence the Stane Street is nowhere between Juniper Hall and the Wandle marshes identical with the modern road. Of its appearance upon the high chalk-land, and of its loss upon the northern slope, I shall speak later.

The last case is the most interesting and the most baffling. Take the crossing of the Wandle, and lay a straight line from that point to the southern end of the Roman bridge at London, and what you get is this: a close correspondence between that line and Tooting High Street; but between

the crossing of the Wandle and Tooting High Street there is a divergence, though a very slight one, to the left or west. To what that divergence is due, neither local history nor local surface condition have informed me. I have found it similarly impossible to discover why there is another long divergence (again to the left or west), taking the road over Clapham Common, nor why it should not join the alignment again until the point marked by St. John's Church in Stockwell, just north of Clapham Station. Perhaps the explanation is, that the land just south-east of Clapham Common was damp—it is still a *Thalweg* marked by ponds—and necessitated a causeway which has been swallowed up, but this upon soil so continuously turned by building is pure conjecture.

At any rate, from St. John's Church, just before Maytlower Road comes into the Clapham Road on the south-east, the old Roman alignment is recovered and maintained, heading straight for the south of old London Bridge to a yard until Kennington Lane comes in. To the north of this all the way to the river there is divergence. The name

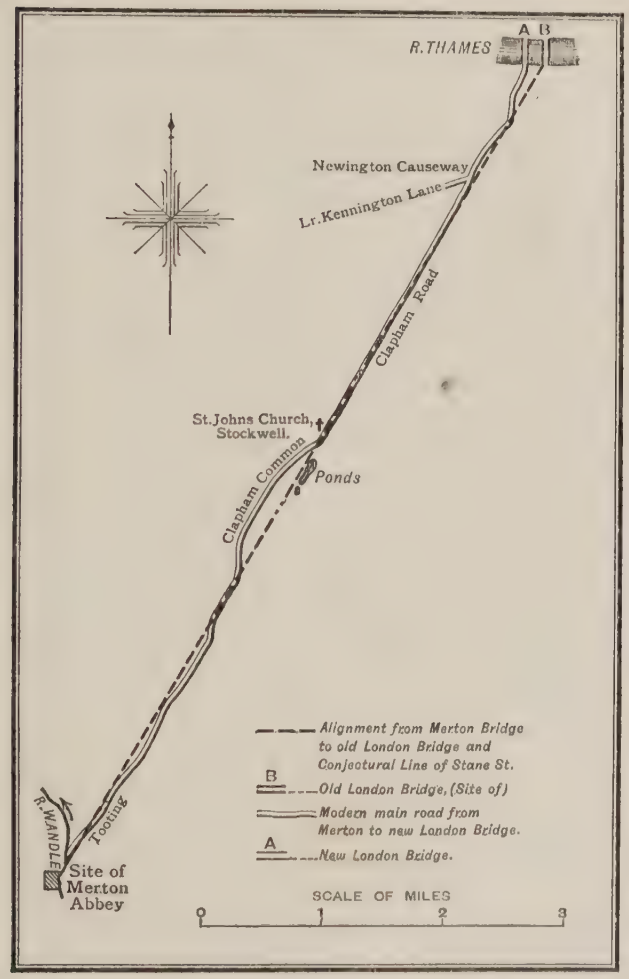

A B
R. THAMES
Newington Causeway
Lr. Kennington Lane
Clapham Road
St. Johns Church, Stockwell.
Clapham Common
Ponds
Alignment from Merton Bridge to old London Bridge and Conjectural Line of Stane St.
B
Old London Bridge, (Site of)
Modern main road from Merton to new London Bridge.
A
New London Bridge.
SCALE OF MILES
0
1
2
3
R. WANDLE
Tooting
Site of Merton Abbey

FIG. 19.

Newington Causeway is significant. The existence of the Causeway from which the present Newington Causeway takes its name is on record, but its exact passage is, I think, lost; and though, in discussing this section later, I shall point out the evidence for the road following a straight line right on to the south end of London Bridge, the modern streets undoubtedly deflect from it.

With this brief survey of what is, historically, the most interesting feature of the road, I must content myself.

A minute examination of the modern, as contrasted with the Roman road scheme, between Chichester and London by the line of Dorking and Pulborough—a personal experience repeated in a score of expeditions covering more than once the whole line of the Stane Street—has convinced me of a connection here between Roman and mediæval travel which does but support all other evidence available to a common knowledge of Europe and its history. Britain in this one instance, as in every other, proves no exception to the great story which links all Christendom with its Roman foundation.

In particular, it has been the purpose of this

section to show—and I hope it has successfully shown—that the divergences of the local post-Roman ways from this, the most direct of Roman roads, does not bear in any place a character which might support the theory of any sudden destruction of our civilisation or any catastrophic abandonment of the Roman highway. On the contrary, they bear witness to the gradual and natural substitution here and there of ways parallel to it, proceeding from it and again converging upon it, and in every case developed by slow usage under the conditions of a declining civilisation, by a usage always attached to the Roman road as a guide; while for far the greater part of its trajectory we have seen the Stane Street to have remained in continuous though local use and suffering no divergence at all.

PART III

DETAILS OF THE ROAD

[*I have not added maps to this last part of my book because the details mentioned are too numerous and close to be properly expressed on the scale necessitated by the size of the volume; for general features I must refer my readers to the general map at the end of the book and for particulars to the* 1-*inch and* 6-*inch Ordnance. These are, for the* 1-*inch, sheets* 270 (*South London*), 286 (*Reigate*), 302 (*Horsham*), 301 (*Haslemere*), *and* 317 (*Chichester*); *for the* 6-*inch, Sussex*, 2, 13, 23, 35, 36, 47, 49, 50, 62; *Surrey*, 7, 12, 13, 25, 33, 34, 39, 40, 46, 47; *London*, 3, 7, 8.]

PART III

DETAILS OF THE ROAD

A

FROM CHICHESTER TO HARDHAM CAMP

The Roman town of Chichester, like nearly all Roman towns in Britain and elsewhere throughout the West, has maintained a continuous existence throughout the whole of the Christian Era. It is, like most Roman towns, of comparatively small area. Throughout the West the Roman municipalities, so far as we can trace them by the line of their walls, were thus crowded into a small space, and some little knowledge of the southern towns upon whose model they were built, with their narrow streets and packed houses, will convince us that a small area is no proof of a small population.[1]

[1] The remains unearthed on the very rare *abandoned* sites, such as Silchester, belong almost invariably to the

Upon the analogy of Bordeaux and one or two other places, which can be and have been carefully studied, there would appear to be some contrast between the extent of a Roman town before and after the break-down of the strict imperial organisation and the line which divides a perfect civilisation from the gradual decline into barbarism of the Dark Ages. The later town seems to have shrunk within walls which its suburbs had exceeded in earlier times.

It is probable, though not certain, that the walls surrounding *British* cities at least date from this breaking-point between the ordered Empire of the fourth century and the welter of barbaric raids and local dissolution at the end of the fifth. It may be, therefore, that the walled limits which we can now trace represent only smaller areas, the minimum into which defence could be crowded; a perimeter reduced to its smallest extent in order to increase the defensive power of the garrison.

But in the case of Chichester, we have reason to believe that the area now traceable

decline of society, and are poor evidence for the pressure of population in earlier and more prosperous times.

corresponds to the original area of the town, for the great military road to London sets out at an angle from the east street of the town precisely at the point where the wall limited the town on this side.

The Stane Street starts, then, from what was the Roman and mediæval East Gate of Chichester; it sets out at an angle 37¼° N. of E., and pursues that direction without a break (save a small exception, which will presently be mentioned) for a distance of 8 miles and 3 furlongs—that is, to the summit of the Downs at Gumber Corner.

We must note here, to repeat what has been mentioned more than once in previous pages, that the alignment so chosen was far from being that of the direct line to London, which direct line would strike considerably to the northward. It is an alignment drawn exactly towards the crossing of the Arun at Pulborough Bridge, and the reason which led the Roman engineers to lay down this alignment for the first section of their road was, as I have said upon a previous page, the fact that it combined the easiest crossing of the Downs with a single passage over the water, avoiding

the double passage that would have been necessary if the line had been deflected by even a degree to the north, for that would have involved the crossing of the Rother as well as the Arun.

For the greater part of its first mile from the East Gate of Chichester, the Roman road remains in use to this day, and is the main road out of the town, which later bifurcates into the Arundel road to the right and the London or Petworth road to the left. But just before the completion of the mile there appears the first anomaly.

At a distance of precisely 7 furlongs from the East Gate of Chichester, and from that point over a distance of half a mile and 130 yards (935 yards), the Stane Street is not followed by the modern road, and the latter, without any marsh or river-crossing or contours on this flat plain to account for its divergence, makes an elbow to the north of the direct line, the outer corner diverging from that direct line by 200 yards.

Such "elbows" are common enough throughout Western Europe, where any considerable conglomeration of buildings has given the right to private encroachments,

during the Dark and early Middle Ages, upon these main roads. But they are rare in the open country. There is no other example of the same thing in the whole length of the Stane Street save at this point; and in the analogous roads of Picardy and Normandy, "elbows" of the sort are difficult to find. Cases, indeed, are not uncommon where, a town or village existing or having sprung up a trifle over the road, the way to it and back again to the road has, in the decay of the Roman metal, become the highway and formed an elbow in the straight line. We have an example of this in that section of the Roman roads of Britain which is most nearly analogous to the Stane Street—to wit, the Western Ermine Street, in its straight run from Stratton past Cricklade, and through Cirencester to Gloucester. Here, where the road crosses the Thames at Cricklade, there is good evidence that the crossing was once in a direct line with the strict direction of the road; but the village of Cricklade having gathered thickest somewhat off and to the left of the Roman way, the later road has left the Roman one over a space comparable to and rather longer than the exceptions we

are dealing with at West Hampnett. But in that case, as in nearly all others of the same sort, the growth or removal of a human settlement explains the divergence.[1]

In this case of Hampnett no such human agglomeration will account for the divergence. We must seek for it in the enclosure of some local landlord, probably late in history, though I have not been able to find the date of it. The elbow as it now exists takes the road along the river to the mill, and back from that point to the main line, which it joins near the church of West Hampnett.

From this point of West Hampnett Church the modern road is coincident with the old Roman one for 2 miles and 5 furlongs, which

[1] The same phenomenon occurs half a mile from North Beach on the Fosse Way, and again at La Madelaine, south of Evreux, in Normandy. There is a striking case at Binche, in the great north-eastern road of Hainault; another at Crepy, near Laon. Normandy, Brabant, Picardy, and Champagne furnish between them perhaps a score. Another analogy to this West Hampnett elbow is at Castre in Belgium, at a distance of 9 miles north-east from Enghien upon the great Roman road from Mons to the north. This deflection is not made to serve a village of later growth, as the affix "La Chausée" shows that the original road passed this way. On the other hand, there *is* a village. At the West Hampnett elbow there is no remaining proof of why the divergence should have occurred.

BOXGROVE ABBEY RUINS AND CHURCH

form part of the London or Petworth road at this point.

In this stretch two points must be noticed as incidental to the Stane Street. The first is the characteristic name Strettington, the place on the "street," which is given to certain fields and a farm immediately to the left of the road; the second is the situation of the old priory of Boxgrove, a little further on, standing five or six hundred yards off the highway. The relation between the priory of Boxgrove and the Roman road lies in the fact that the priory was founded in the generation of the Conquest within forty years of the battle of Hastings—that is, in a time which was still largely dependent for its communications upon the great Roman highways. Nor is this the earliest mention of the site, for we have, in the Doomsday Survey itself, record of a College of Clerks at this point, and we are free to conjecture that a Saxon ecclesiastical establishment of unknown antiquity stood at this spot.

Monastic establishments are, as we have often remarked, perpetually to be found along the line of the old Roman highways, especially when those establishments are of ancient date,

and when their foundation precedes the development of the new roads which came with the later twelfth and thirteenth centuries. On this account the existence of such establishments may not only be continually referred to the line of a Roman highway, but occasionally permit us to infer the passage of such a highway when all visible traces of it have been lost.

The Stane Street, after passing the site of Boxgrove Priory, passes through Halnacker Village until it reaches Warehead Farm.

All this way the road has been very gradually rising for the crossing of the Downs. On leaving the East Gate of Chichester its surface is a little over 30 feet above the sea; it is 60 feet at West Hampnett Church, 70 feet by Strettington; crosses the 100-foot contour abreast of Boxgrove, and by the time it reaches Warehead Farm is over 180 feet above the sea, having risen 150 feet in its first 4 miles; for the bifurcation at Warehead Farm is precisely 4 English miles from the East Gate of Chichester. From this point, the bifurcation at Warehead Farm, to a point just under a mile further on called "Sea Beach," there is an interesting and characteristic de-

flection of the modern road from the original line of the way.

We have seen that many of the principal roads of England which appear to have arisen independently of the old Roman system, and only to use that system on occasion when it happens to serve their direction, prove, upon closer examination, to be the direct descendants of the Roman ways, which ways have suffered continual deflection from known causes, but to which the modern road continually returns. An especially interesting example of this I have discussed, and shall again deal with, in the neighbourhood of Dorking, upon this same road.

The principal causes of such deflections we saw to be steep hills, marshy land, and the growth of densely inhabited areas, and private interests which tended to encroach upon and turn the original and direct alignment of the Roman engineers.

This deflection of the modern road from the Stane Street at Wareham Farm is an example of the first case. The steep and nearly isolated hill called Halnacker Hill, with its windmill upon the summit, was not too steep for the purposes of a Roman road,

and that road goes right over the shoulder of the hill, touching the 300-foot contour, and coming down as steeply upon the other side without leaving its alignment by a yard.

For marching and for the small two-wheeled vehicles which were principally in use with the Roman forces, upon a good surface steep gradients of this kind were useful enough. The disadvantage of their arduous climbs and sharp descents was compensated by the advantages of a simple and therefore cheap plan of construction, a full view ahead to lessen the danger of surprise, *and the more prompt and regular management of troops that is always possible upon an unswerving line.*

But when the principal use of a highway was for the passage of heavy farm vehicles, or even of chance travel, men would naturally tend to avoid these violent gradients and to skirt round the base of the hill. A track thus established would be more naturally used by the heavy vehicles of agricultural work, and particularly would it be fixed as the regular road, with the increasing size and weight of the vehicles in the transformation of farming in and after the seventeenth

century. We shall find, therefore, that almost universally throughout Britain and Northern Gaul, where the old Roman military road takes a very steep gradient to cross in a direct line a valley or a hill, some track, formed doubtless in the Dark Ages and metalled in modern times, avoids the steepness of an old alignment at the expense of a detour and of some increase in distance.[1]

The line of the old Roman road over Halnacker Hill has survived in its entirety. The first part is a clearly marked lane reaching almost to the summit of the rise; the second part is marked by a line of hedge, and at the foot of the decline joins the modern road at a point 173 feet above the sea. Here, for a quarter of a mile, the modern road and the Roman road coincide. The name of this piece and of the farm adjoining it is signifi-

[1] There is a striking example of this at Waterstratford, near Buckingham, where the Roman road from Bicester to the Watling Street takes the valley sheer, while the modern road goes round by Tingewick. Another very striking British example is to be found upon the Fosse Way, where it crosses the Cam Brook Valley, but it would be tedious to enumerate many such cases; they are to be discovered in almost every place where a Roman road deals with an abrupt valley or hill.

cant. They are called "Sea Beach," and from this it has been conjectured that the metalling or foundation of the road, even possibly as far as Ockley, was originally made of stones brought up from Selsey and its neighbourhood.[1]

At the end of this short section, and at a distance of 5 miles and $1\frac{1}{2}$ furlong from the East Gate of Chichester, the Roman way ceases to correspond with any modern road, nor do we find it corresponding again with a metalled highway until we come to Pulborough Bridge, 9 miles further on.

On these 9 miles, the first half of which are occupied by the Roman road's crossing of the Downs, and the second half by its passage through the broken country at their foot, between their escarpment and the Arun, the Stane Street appears to have fallen out of use as a continuous means of communication, from some period in the Dark Ages to modern times, and this singular break in the continuity of its use suggests the com-

[1] Dallaway was of this opinion, but Martin (*Sussex Archæological Journal*, 1859, pp. 127–146) described the patch of gravel here as being a natural bed; it is not marked as such, however, on the new Geological Survey.

parative isolation during the Dark Ages of the sea plain from the Weald.

The modern road goes off after Sea Beach to the left and makes for Petworth. The communication between Chichester and London, therefore, became at some early date, and remains to this day, divorced from the old direct road taken by the Roman armies. When the Stane Street becomes again a road in continuous use at Pulborough, it is a modern road unconnected with the approach to Chichester, and connected only with that to Arundel. Moreover, until quite modern times even this piece north from Pulborough was not used as the main road to London from that place and from Arundel for many miles. And even so, beyond Billingshurst it leaves the line of the Roman road to pass by Horsham, and only returns to it again in the neighbourhood of Dorking.

When the system of British roads gradually regrouped itself at the close of the Dark Ages, it took the form which we still see continuing in some parts, of linking up the tracks which served one countryside with those that served the next, until at last the continuous highway between any two great centres was over

a tortuous line built up of such chance sections. The great Roman ways lingered everywhere, though with diminishing usefulness, throughout the West, some of them preserved in their entirety; but where they passed through desolate stretches, such as that which the Stane Street passes in crossing the Downs and later the height of clay upon the Weald, their use must have grown rarer and rarer, though even so they served for communication upon particular occasions where large bodies of men or widely spread interests had to deal with great spaces of travel. It is this last kind of use which explains to a late date the presence upon the Roman roads of the monastic establishments and the fact that until well into the Middle Ages nearly all great battles take place in the neighbourhood of a Roman road, which has served as a line of march.

The Stane Street, then, after Sea Beach, directs itself through an uninhabited belt of chalk, which is the slope of the Downs, and which rises throughout 3¼ miles to Gumber Corner. It was a stretch denuded of men, because water was not to be obtained in the greater part of it, save at the expense of very

deep digging;[1] while the lower part was presumably covered by that great wood called the Nore Wood, which to this day clothes all this part of the Downs and prevents the growth of villages.

From Sea Beach to the crossing of the Ertham road and the entry of the Nore Wood, the Stane Street goes over a sharp rise of neglected grass and woodland. It is traceable all the way, not as a track, but as an irregular mound, sometimes marked by a hedge. Just before reaching the Ertham road its passage is confused by a tangled undergrowth, but on the far side of that road, and during its mile-long passage through the Nore Wood, it forms a clear and unmistakable track, raised for the most part to a height of several feet above the ground about it.

I say "for the most part"; for the Stane Street here begins to exhibit a characteristic discoverable in all the old Roman roads of the country, which is, that where it reaches a patch of boggy or marshy land, no matter how small in extent, it disappears. The

[1] The well at Gumber Farm is between 300 and 400 feet in depth.

effect of time on such patches is gradually to swallow up the foundations of a Roman way, and the conspicuous ridge of the Stane Street disappears thus in three or four places of a few yards in extent during its passage through the Nore Wood.

At its issue from this forest it has climbed to nearly 400 feet above the sea, and its remaining course to the summit (where it is a few feet below the 700-foot contour) is for the most part through broad fields, and, in the last section of it, over the open Chalk Downs.

Where it crosses the broad fields of Gumber Farm, the Stane Street is no more than a ridge supporting a long straight hedge dividing these fields, but upon the chalk it reappears again in a curious formation, which has given rise to rather unprofitable discussion in archæological journals.[1] It is singularly clearly defined and raised quite 4 feet above the surrounding level, but it shows the relics of some sort of construction passing down its middle, raised for what purpose or in what period it is impossible to discover or even to guess. We only know that it exhibits this

[1] See *Suss. Arch.*, 1859, pp. 127–146

THE STANE STREET ON LONG DOWN
(LOOKING SOUTH EAST, WITH "SEA PLAIN" IN DISTANCE)

feature upon the height of the Chalk Hills alone, and, having reached their summit, continues in its strict alignment for a few yards down the further gentle slope, and, at the shoulder where this becomes steep, takes its great downward sweep along the escarpment of Bignor Hill to the plain.

This summit where the Stane Street crosses the saddle of the Downs is a very remarkable point in the trajectory between Chichester and London.

It affords a clean view of the space between the Surrey hills and the sea. The spire of Chichester forms a conspicuous landmark in the plain to the south; Pulborough, the bridge of which is the goal of this section of the road, is equally conspicuous somewhat nearer, in the Vale of Arun to the north. The shoulder of Leith Hill, the next point after Pulborough to which the alignment of the road directs itself, may be followed in its detail in clear weather, so that any good mark upon it—a couple of 50-foot poles, for instance, with canvas stretched between—would be clearly visible. What is more, the gap in the Surrey hills whereby a road from Pulborough should lead to London stands

conspicuous when viewed from this height, the local modern name of which is Gumber Corner. It was undoubtedly the point from which the general idea of the road was first taken. Three great landmarks—one upon the summit of the Surrey Downs, the second on Leith Hill, the third erected here at Gumber Corner—could be made the pivots for the whole survey. From the first the crossing of the Thames at London could be easily marked upon the north; from the second this to the north and Gumber itself upon the south, while from Gumber, Chichester and the Channel upon the south lay spread out beneath. Four views taken from three points thus command the whole 57 miles.

Taken along this summit at Gumber, the road still points exactly to the southern end of Pulborough Bridge, but it is remarkable that, save possibly in the last stage of the mile before Pulborough (which, as we shall see, is lost), the actual road does not correspond to this ideal alignment.

There is here neither error nor doubt. A Roman military road was plotted in great straight sections. When the nature of the ground permitted it to follow the ideal straight

line stretched and probably staked out between the termini of each section, it did so. When the nature of the ground forbade it, it was split up into shorter deflected straight lines, sometimes joined by curves, but it returned again to the plotted alignment as soon as possible. The gap between the summit at Gumber and the point where the Roman road may have returned to its alignment at Hardham Camp, is one of 4 miles and 7 furlongs. During the whole of this distance the road lies off the straight line, first to the right of it, as it curves down Bignor Hill, then, crossing the ideal line at the foot of the hill, to the left as far as the camp.

The reason that the Stane Street behaves in this eccentric fashion over this gap of nearly 5 miles, we have seen to be ill-apparent upon a study of the map alone, and that because the English Ordnance Map, though easily the best in the world,[1] has one

[1] The complete English Survey, with its 1-in., 6-in., and 25-in. scales, its old and new geological appendix, and the various forms in which it can be obtained, has no rival in the cartography of Europe, and therefore of the world. It is a point too little known in this country and well worthy of remark. The German maps are, as one could expect, painstaking and thoroughly unsatisfactory; the Swiss, though

defect, which is that the contour lines are too far apart. Even upon the 6-inch scale they are 100 feet apart, save in the first 100 feet, where they are 50 feet apart.

The result is, that many details of the surface, essential to the understanding of history or topography, must be visited upon the spot, and that the writer upon those subjects must establish contour lines of his own between the 100-foot contours.[1]

The road first descends the flank or escarpment of Bignor Hill in the broad curving sweep to which I have already alluded. The

very detailed in sections, not as thorough as our own; the Italian upon too small a scale; the Spanish, save for sections around Madrid as a centre, and with difficulty obtainable, non-existent; the Belgian, though excellent in plan (especially the 1/40,000), not so well printed; the French, though numerous and varied, not the equal of ours even in the 1/80,000 map. Sectional maps of particular districts (such as the neighbourhood of Paris as the 1/20,000 coloured) are perhaps superior both in France and Switzerland to those of this country, but for a general survey nothing approaches the English.

[1] There is no reason why this grave defect should not be remedied upon the 6-inch maps at least, and why contours of 20 feet should not be introduced. They would be sufficiently far apart even upon the steepest hillsides. The Belgian 40,000, and the French garrison maps upon the same scale (less than 1½ to the inch), show contours at 10 metres —that is, about 33 feet—and they are always perfectly plain.

combe below this curve bears the name of Cold-Harbour, a name already discussed in a previous page, where we have seen that only one other Cold-Harbour lay upon the Stane Street, and that exactly in the elbow of a similar flexion upon the shoulder of Leith Hill. In this broad sweep the Stane Street falls from the 700-foot contour to the 400, where it runs just above the chalk-pit which marks the foot of Bignor Hill, and at which a modern lane leaves the Roman road to join the valley road below. Up to this point the Stane Street, curving down the flank of the hill, has remained in a sort of use; an occasional cart will go up it on the rare occasions when there is any need for such a vehicle to reach the summit of the Downs, but it is not metalled or preserved in any way. It only forms a rough platform of chalk such as is always produced by traffic, and even by the passage of animals over the steep escarpments of that geological formation.

After the point upon the 400-foot contour, just above the chalk-pit, where the modern lane diverges, the Stane Street has fallen quite out of use. It falls to the 200-foot contour, which is the base of the Downs, in

the next quarter of a mile, goes through a thicket called Bignor Tail Wood, and thence forward disappears as a track altogether until Pulborough is reached, a distance of nearly 5 miles.

But though it is lost as a track in human use, its passage can both be inferred and actually proved during the greater part of the way. It ran north-east from the end of Bignor Tail Wood to the footpath which is here parallel to the road at the foot of the Downs.

In the field beyond this footpath it makes a bend still further northward, and crosses the road at the foot of the Downs (that is, the road between Bignor and Westburton) at a point not 50 yards west of the lane by which Hadworth Farm is reached from this road, and it makes straight for a point a third of a mile further on, where this lane comes up against another lane in a "T" 100 yards west of the south-west corner of Grevatt's Wood. Though quite lost as a track through these fields, the farmers can clearly recognise its direction by the different colour the soil still retains, especially in the first ploughing.

To this section belongs the very remarkable monument known as the Roman Villa or Pavement of Bignor.

Six hundred yards away to the west of the road there stood, upon one of the most solemnly beautiful sites of South England, covering a general southern slope that looks right at the dark wall of the Downs above it, a great Roman mansion. Of the purpose it served, whether it was the house of a functionary or of a great squire, we know nothing. We have but the vaguest conjecture upon which to determine its date. But that so much should have been spared by so many centuries is a sufficient proof of its importance. Even of what remains, the extreme portions upon the east and west are over 200 feet apart, between the north and south more. The materials, as we can still tell, were drawn from every quarter, the stone of the pillars was from Dorsetshire, part of the mosaic materials perhaps from Italy. Even the site of the Bath, which would most naturally disappear and be filled up in the course of so many generations, can be traced, and the whole establishment is on the scale of a palace, though, since the plan and pavements

only remain, the eye has difficulty in appreciating on the open field how great the building was.

At the point near the south-west corner of Grevatt's Wood to which we have traced it, the Stane Street turns again, this time more to the east, and runs almost due north-east down the sharp slope of that copse from the 100- to the 50-foot contour, and in the field into which it emerges on leaving the wood presents very clear relics of its passage.

It is worth noting that in such traces of the road as farmers have discovered between Bignor Hill and Grevatt's Wood, red gravel and red flint, that is, iron-stained gravel and flints from Coldwaltham, occasionally help to recover its trace, and this would argue the metalling of this part of the road southward from Pulborough with stone brought from the Weald. It is but what we should have expected, for it was more convenient to bring such metal along the flat than to depend upon the gravel or chalk-flint coming from over the Downs.

This field has always been marshy. A spring of water rises above it and drenches

all the land down to the brook below. There is evidence that when the road was built a culvert was made here for the passage of the water, a culvert which was of wood, at least when it was last repaired, with perhaps a washing-place upon the further and lower side. Of the causeway by which the road must have passed the stream immediately below, there is no trace whatever left. Here, as everywhere else in marshy land, the road has sunk. But we know that it must have crossed exactly at the fork of the roads just beyond, because this point is in a line both with the remains outside Grevatt's Wood and the cutting, to which allusion will be made in a moment.

It is worth noting that where the Stane Street crosses this stream, it is at the lowest point in its whole course, to wit, 26 feet above the level of the sea.

It climbed then from this crossing of the stream to the fork of the road just above, and continued right over the hill, leaving the village of Watersfield a quarter of a mile to the left, and passing everywhere through land either now or recently under the plough. Not a trace of it is here visible

to the eye. Here and there patches of it show slightly after the first ploughing, but our real guide to its alignment in this last piece is the exact coincidence of the direction of the last section visible outside Grevatt's Wood, and a *cutting* which still remains conspicuous, and which I will now describe.

The beginning of this cutting is exactly $1\frac{1}{2}$ mile and 400 feet from the last sign of the road outside Grevatt's Wood. It is to be found exactly 250 feet east of the house and buildings called Ashurst, upon the road from Coldwaltham to Petworth. Here a ridge of sand stands boldly up upon the summit of a roll of land, and through this section the Roman engineers drove a dyke, which stands almost as neatly cut to-day as when they left it. Upon the far side of the cutting the road is again lost.

This is unfortunate, for in the remaining three-quarters of a mile between the cutting and Hardham Camp the Stane Street must somewhere have turned, and we are unable to find its precise turning-point. The line from Grevatt's Wood to the cutting, prolonged, would lead us quite 600 feet to the west of the camp, and, what is more, would take us away from

the direction of Pulborough Bridge altogether. Moreover, the road is quite plainly visible entering the camp by its south-western gate, and this line in its turn, if prolonged, would miss the cutting by something like 300 feet.

Perhaps the guess taken by the Ordnance Map is the wisest, though it is no more than a guess. What the Ordnance Map does to establish the turning-point, is to take the axis of the gate on the south-west of the camp, to draw a line from the centre of the gate perpendicular to its axis: this it regards as the line on which the Stane Street entered the camp. It next draws another line in the prolongation of the cutting, and it fixes the point of flexion in the road at the point where these two ideal lines cut one another. Beyond this guess there is nothing to be done, for all trace of the road is here lost.

Hardham Camp itself is still very clearly defined, though the relics of buildings which seem to have remained until modern times have now wholly disappeared. It was more perfect before the little single-line railway which goes from Pulborough to Chichester, and serves Petworth, Midhurst, and Goodwood,

was built, for this line has cut right through the north-western part of the camp and destroyed it. Enough remains, however, for us to estimate what this first halting-stage upon the great military way was in area and purpose. The area enclosed was about 4 acres: less than 500 feet square. It afforded, therefore, allowing for two principal cross-ways within it, shelter for, say, 4000 unmounted men under canvas; with proper buildings, anything up to double that number. Even upon that calculation the station, like most English stations, is a small one. It presupposes the going to and fro upon this military road between London and the Channel, not of armies, nor even of divisions, but rather of a force which served the purposes of a police.

Armies in great numbers must, of course, have used these military ways upon occasion, but a fortified area of such dimensions could have been of no use to them as a stage upon the march, save as a point where they would find information, perhaps remounts, or, at any rate, postal facilities and certain stores. We must suppose that these military ways, when they were used for great expeditions, such as

that of the usurper Constantine, or that of Maximin, pitched camp in the open field.

Before leaving this section of the road, we must note opposite Hardham Camp, and only a quarter of a mile south-east of the road at this point, the establishment of yet another religious house connected with the Stane Street, Hardham Priory.

The establishment of Hardham Priory is lost in antiquity. We cannot trace it indeed beyond the thirteenth century, but it was evidently then long in existence, and, though a place of no great importance (by the time of the dissolution it had dwindled to a prior and two canons), its site is significant. It stands, as we saw Boxgrove to stand, just off the road to the south-east of it, like Boxgrove, and at just the same distance as Boxgrove.

Like Boxgrove it was connected with a populous part of the country, within a mile or two of a considerable centre, Chichester in the one case, Pulborough in the other. Hardham seems to have stood to that section of the Stane Street which passed through the lower Arun valley, much as Boxgrove stood to that section of the Stane Street which served the fertile sea plain. If its origin

should ever be discovered, it will presumably appear that it was established no later than the twelfth century, in which the old road system, though decayed and in places ruined, was still the main system of communication throughout Britain.

Hardham Priory has a further interest in the archæology of the Stane Street.

It was presumably the proximity of this house which led to the removal of all traces of building within and about the camp.

Such Roman building was the natural quarry of the Dark Ages. The camp at Alfoldean, as we shall later see, having no habitation in the neigbourhood, was spared. Hardham Camp has furnished little to modern research save certain burnt remains of what may have been wooden beams.

With this we close the first section of the Stane Street. Its exact length from the East Gate of Chichester to the south-west gate of Hardham Camp, measured along its actual trajectory upon the largest scale map, and allowing for the conjectural point of flexion just beyond the Ashurst cutting, is 13 miles 2030 feet.

B

FROM HARDHAM CAMP TO ALFOLDEAN BRIDGE

If we were taking the Stane Street by its great limbs instead of by its stations or military halts, we should have had to make the first section go as far as Pulborough Bridge, for Pulborough Bridge is the end of the first direct alignment. I have chosen, however, as the reader knows, to take my sections by the stations, and in this second section I deal with the run from Hardham Camp to the next camp, which is 12 miles further north, at Alfoldean.

Starting from the southern, or rather south-western gate of the camp, and measuring to the south end of Pulborough Bridge, is precisely 1 mile and 1½ furlong.

During the whole of this distance the Stane Street has entirely disappeared. We can, however, both conjecture its path with accuracy and explain why it is lost.

We can conjecture the path it took with accuracy, because the northern exit of the camp is exactly upon the alignment which was stretched by Roman engineers from the East Gate of Chichester to the south end of Pulborough Bridge. It is, therefore, virtually certain the causeway ran upon that line; and a causeway there must have been, because nearly the whole of the intervening space is marsh, the feature of which explains, as we have seen, the disappearance of the road.[1]

The use of that common sense, without which history cannot be written, should be sufficient to convince anyone that Pulborough Bridge, as we now have it, corresponds exactly with the Roman crossing of the river, for coincidence could never account for the exact termination at this point of an alignment over 14 miles in length. We have, however, positive proof as well, for when the

[1] There is one argument and one only for the conception that the present causeway, or rather the last quarter of a mile of it, corresponds to the Roman road, and that is that the modern road takes the marsh at the narrowest point. But the saving in length, compared with a straight line from the camp to the bridge, is not 50 yards, and this economy in the cost of construction would have been gained at the expense of the military advantage obtained by a straight bit of road commanding the passage of the river.

PULBOROUGH BRIDGE AND THE RIVER ARUN

stone arch of the present Pulborough Bridge was being set against its bank in the year 1829, in digging for the foundations of the abutment, the end of the Roman causeway was discovered, metalled with gravel.[1]

The Stane Street then crossed the river exactly where Pulborough Bridge now crosses it. It must have climbed the hill by the line of the present road, as the contours of that steep nook will convince any observer upon the spot, and, once at the top of the hill, it started upon the second great limb of its trajectory.

Before we speak of the characteristics of this second limb (in the midst of which the second *mansio* or camp-station is to be found), it should be noted that Pulborough is certainly a place of very ancient human settlement, its place-name meaning, presumably, "The Town upon the Marsh"—a celtic combination. There were, as we know, substantial remains of Roman buildings there until quite lately, as historical time goes, but unfortunately

[1] Before this bridge of 1829, and during the loss of the Roman causeway in the Dark and Middle Ages, we must presume that—as at Staines and in other analogous instances—various bridges succeeded one another, for the last bridge before this stone one was a wooden one, and not absolutely identical in site.

little has survived to our sceptical day. It is therefore open to those (the more numerous of modern scholars) who are for ever belittling the Roman foundations of this country, to say that we have no direct proof of the origin of these monuments, which have now disappeared. But Cartwright, in his history of the *Rape of Arundel*, testifies to a curious and perhaps religious point, that the stone used in one of the largest of these bodies of building was, in the opinion of experts of his time, Italian.[1]

To return to the alignment of the Stane Street: the first section, that leading from the East Gate of Chichester to Pulborough Bridge, was drawn upon an alignment of $37\frac{1}{4}°$ North of East in direction. From the top of Pulborough Hill the Stane Street bends sharply northward, and points in a direction 59° North of East and upwards. It bends, that is, nearly 22° to the left or north.[2]

[1] Cartwright, *Rape of Arundel*, p. 357. Four pigs of Roman lead were also found in the vicinity. (*Gentleman's Magazine*, 1824–5). Note further the local name "Home Street," which is traditionally *Holm Street*, and the name of "Borough Farm" on the same ridge.

[2] It is remarkable that this alignment is taken, with a back sight, towards the end of the bridge. In other words,

The Stane Street pursues this direction of 59° North of East for a distance of exactly $3\frac{3}{4}$ miles, reckoning from the south end of the bridge. Its absolutely straight line has been marred by the necessity of crossing the railway, and by slight sinuosities of 5 or 6 yards or so where it climbs Codmore Hill, such sinuosities as would arise from conditions of traffic on the rise during the centuries in which the Roman way was left with a broad neglected stretch of grass at either side. From the top of the hill, however, even these sinuosities disappear, and the dead straight line is maintained to the distance I have spoken of, $3\frac{3}{4}$ miles from the South end of Pulborough Bridge. There, just after crossing a little stream at the south wall of the building called Todhurst Farm, which stands upon the east of the road, comes that curious flexion in the alignment which has been discussed on pp. 96–97.

On its new course from Todhurst Farm the Stane Street proceeds as a modern road

the Roman engineers did not plot out the Chichester to Pulborough section, and then plot out another section from the top of Pulborough Hill, but schemed for two straight lines that should have one definite point where they crossed, to wit, the southern end of the bridge.

$2\frac{1}{2}$ miles on, and there enters the village of Billingshurst.

It is here to be remarked that the Roman road, as is the case in nearly every place where these military alignments pass through places continuously inhabited after the break-down of the Imperial government, has been encroached upon to the right and to the left. The modern traveller, looking along the Stane Street from a point about a mile and a quarter short of Billingshurst to a point half a mile beyond the centre of that place, does not see it as a straight road. It appears to wind. The sinuosity is very slight, but the least bending in a line, when one is looking along it, is most noticeable, and in this section an observer unacquainted with the origin of the Stane Street might doubt its being a Roman road at all.

When one has climbed the hill outside Billingshurst, and as one approaches the grounds of Summer's Place, the direct alignment is again recovered and is maintained uninterruptedly to the branching off of the Horsham road at Five Oaks, which is exactly 7 miles 1 furlong from the crossing of the Arun.

It was probably at this point that the Stane Street began to lose in the Dark Ages the regular traffic which can alone maintain the tradition and existence of a public way, for it was at this point that the lack of any necessity for going further northwards and the presence of a local approach to the local centre of *Horsham* led travel off the road towards the east.

The antiquity of Horsham we have no documents to determine; but when Horsham is first mentioned in the Middle Ages, it already appears as an established town, and the whole history of the place and of its political connection is bound up, *not* with the north, but with the Weald and the southward traffic of the Weald. A way from Horsham to Arundel and to Petworth and to Pulborough there must have been in the Dark Ages, but the High Weald north of Horsham has little history and no continuous traffic attached to it. It is upon that high Weald that the Stane Street has degraded most thoroughly, and so to-day a man who has followed the Stane Street as a modern road as far as Five Oaks must, if he would continue a direct journey to London, take

the Horsham road. Modern short cuts have been devised which will save him from passing through Horsham itself; but he cannot follow the straight line up the old Roman way in a wheeled vehicle much further, for its continuity, as we shall see a few pages further on, is broken but a short distance to the northward of this deflection at Five Oaks Green.

All this part of the Stane Street from Five Oaks, and beyond it as far as the point bearing the name of Park Street[1] (a name obviously derived from the road), was restored and kept up as a public way from the middle of the eighteenth century, but beyond Park Street no attempt was made to restore it to use until 1809.

It is easy to see why the eighteenth century restored it up to Park Street: it would make—in the general rebuilding of roads in that time—a communication between the village of Slinfold and the south. That it was not restored up the next mile further to the river until 1809 was possibly due

[1] This point is at the first turning to the right 400 yards after crossing the railway. The road to the right goes to Slinfold, which is in the immediate neighbourhood.

to the fact that the old bridge had been allowed to break down[1] and had never been renewed; so that wheeled vehicles proceeding from Slinfold to Guildford and all the points in West Surrey had to make a detour of 4 or 5 miles in order to join the east and west road. That is all of a piece with what we know of the rarity of communication in the centuries between ancient and modern civilisation across the Weald.

At any rate, in 1809, the old track was taken over by the Duke of Norfolk of the day, as a speculation, metalled right up to the Arun, and a bridge there thrown over the stream. From that date, therefore, the Stane Street could be used as a continuous road all the way from its first to its second crossing of the river.

It reaches the river again at a point exactly 10 miles 550 yards from its former crossing-place at Pulborough, and just to the south of the river-crossing and the east of the way lies the second of the stations, that called after the bridge "Alfoldean."

The station at Alfoldean Bridge is to-day

[1] I have no evidence on this point. It is a mere conjecture.

not as clearly marked as the station at Hardham.

This is curious, because it retained until modern times relics of brick buildings, there being no considerable mediæval establishment near by to use it as a quarry. But for some reason or other, the vestiges which were clear one hundred years ago are now very indistinct.

The site is said by recent observers to be a natural gravel site coming accidentally in the midst of the clay.[1] I have seen no proof of this myself upon the spot, though I have examined it carefully. The field is of the same soil as those around it, at least superficially and to the plough.

This year (1912) a few feet of mosaic were turned up in it. I found the line of the bank and ditch less distinct even than it was a year ago, and far less than when I first saw the place in the early nineties.

[1] Dallaway, who was Rector of Slinfold, thought (and says in his History) that gravel was artificially brought for the purposes of the Stane Street and of the station, but further research claims to have disproved this. It must be remarked, however, that the old series of Ordnance Geological Maps marks no gravel; the new series has not yet reached this point.

C

FROM ALFOLDEAN BRIDGE TO DORKING

The third section of the Stane Street—that is, the day's march between the second and the third station—can be limited exactly as to its southern terminus: its northern terminus can, as we have seen, only be conjectured.

That portion of the Stane Street which runs from the camp at Alfoldean Bridge (which I have called the second *mansio*) to that point in Dorking where I conjecture the third camp or *mansio* to have lain, is perhaps the most interesting of the five day's marches into which the road divides itself. It contains at once the greatest proportion of disused track and the most perfectly preserved piece of the road which has remained, probably from the time of its original construction, in uninterrupted use.

The total distance from the river bank and the northern limit of Alfoldean Camp to the junction of West Street, High Street, and

South Street in Dorking is 10 miles 6½ furlongs, of which 7 miles 3 furlongs are the continuation of the alignment from Pulborough to Leith Hill, and bring one to the terminal point upon the shoulder of Leith Hill, whence a new alignment is taken on to Juniper Hill for passing the Dorking Gap.

The first 200 yards after the crossing of the Arun nearly coincides with the metalled road which leads from Alfoldean Bridge to the point called Roman's Gate, where the road restored in 1809 falls into the Horsham and Guildford road.

I say "very nearly" because usage led the old green lane (the metalling of which in 1809 provided the restoration of the Roman road) just slightly to the west of the original line, or rather in a sort of curve which, at its greatest, is some 10 or 11 yards off the direct alignment. It is probable that the Roman Bridge stood nearly 30 feet to the east of the present Alfoldean Bridge, for it is such a point that fits in with the exact alignment between Park Street and Rowhook.

North of the Horsham and Guildford road the passage of the Stane Street is very confused. It is not exactly lost, for a modern

lane and bank not quite corresponding with it, follows it up as far as the School House at Oak Pollard, and as this line also runs along the edge of a wood, now just inside that edge, now just outside it (the Wood is called Roman Wood), a further element of confusion is introduced; but it can be followed by taking a few clear points. The shed of Waterland Farm stands upon it. It just cuts the corner of the road at Oak Pollard, and exactly corresponds to the entrance of the Chequers Inn at Rowhook. The Chequers Inn at Rowhook is less than 6 furlongs from the camp at Alfoldean and the crossing of the Arun: yet in that short distance the Stane Street has risen 166 feet. Alfoldean Bridge is just under 84 feet above the sea, the Chequers Inn just under 250. The Chequers Inn at Rowhook is also the point where another Roman road left the Stane Street and branched off north-west.

With regard to this second road, there has been a great deal of inquiry, and not a little doubt has been expressed of its existence. I do not share these doubts, for I know, after many years' observation, and in more than one province, how utterly and inexplicably a

Roman road will disappear, and how rightly one may infer its existence from no more than two points upon its alignment. This particular road points directly at the camp on Farleigh Heath (which is most undoubtedly Roman), and what is more, the distance from Alfoldean Camp to this other Camp on Farleigh Heath is that of a short but quite normal day's march—all but 9 miles.[1]

The Stane Street proceeds north-east from

[1] As to where this north-westerly road may have proceeded after the camp on Farleigh Heath, I have found no evidence. The alignment prolonged does not strike Guildford, but leads up to St. Martha's Chapel, leaving that building on the left, or to the west, and passing just over the shoulder of its isolated hill; but I know of no remains of any road on this line.

We may be perfectly certain that a Roman military road negotiated somewhere the passage of the Wey, and the fact that Guildford existed in the Dark Ages is excellent ground for supposing that it also existed in Roman times, but whether this road pointed at Guildford and there struck another road between that crossing of the river and London, we have no evidence upon which to decide.

The evidence for the existence of the road from Rowhook to that point just under Winterfold (where it is lost) was furnished to the Ordnance by Mr. Harrison, Mr. Worsfold, and Mr. Barlow. It has been traced by the flints used in the metalling of it over the clay in various parts of the parishes of Ewhurst and Cranleigh. The part near the Chequers and Rowhook is the least evident, but the alignment points exactly at the Chequers.

Rowhook, now through copses, now through fields, forming a boundary for the most part, and always clearly traceable until at a mile and a quarter from Rowhook it comes to the buildings of Monk's Farm. In this mile and a quarter it presents no remarkable feature save that in spite of the deep clay of the soil and the sharp gullies, such as that of Honey-lane Gill, it has nowhere disappeared : in one place it spanned a ravine with an embankment over a culvert. This embankment now hangs in a great ruin over the stream, but has not yet fallen.

Nowhere in this stretch is it used as a road, though the right-of-way exists along it in some parts, and a path often runs either along it or beside it.

For nearly a mile after Monk's Farm it coincides either exactly or nearly with the green lane running north and east from that point. It corresponds with it exactly for the first quarter of a mile, then for the next quarter the lane runs not on it but along it to the east. During the remaining half-mile, or nearly a half-mile, it corresponds with the lane again. At a point not quite half-way in this stretch (to be accurate, 3 furlongs from Monk's

Farm), it crosses the county boundary, and those interested in the evidence for an old road will note that from before Rowhook right up to the county boundary, the Stane Street is the frontier between two ancient parishes, Rudgwick and Warnham. Each of them is a typical forest parish, running up backwards from its centre of habitation into its hunting-ground of the Weald.

The end of this stretch of not quite a mile from Monk's Farm is a point where the lane falls into the metalled road near Oakwood Hill, with its collection of cottages and blacksmith's forge. It proceeds over an open field, where it is very clearly marked indeed, and a quarter of a mile further on plunges down a steep bank to cross the Holden Brook —one of the tributaries that feed the Arun from the northern Weald.

This, the first stream of any size which the Stane Street has had to pass on its way north from Alfoldean Bridge, is at a distance of 3 miles and not quite a half from that starting-point, and it merits very careful attention, for it illustrates more than one feature in the engineering and history of this Roman road.

In the first place, this point (which I will call Holden Brook Crossing) is an example of the way in which the Roman engineers took such steep pitches as a modern road would avoid. It is the steepness of the bank above the brook which has caused the modern road here to go round a couple of hundred yards to the west, and that, by the way, is typical of the fashion in which modern roads have grown up round the Stane Street, now coinciding with it, now diverging from it. The bank above the crossing of the brook was too steep to be taken absolutely directly, and a double zigzag led the wheeled traffic down to the water. No trace of the Roman bridge across the brook remains. The Stane Street lies straight over the open field to the northern side of the stream, and 300 yards from the crossing coincides with the metalled highway.

From this point right through Ockley village and on to the gate of Buckinghill Farm, a total distance of over 2½ miles, the Stane Street has been used for centuries as the principal highway of the district, and is to-day a broad modern road. Why it should have exactly survived here and have fallen

out of use to the north and to the south of this stretch, is another subject of inquiry, but not one capable of decision.

At any rate, the best known, the best preserved part of the Stane Street, begins at this point and runs right through Ockley village. It never loses its alignment; it is everywhere a metalled road; it has been in constant use for centuries, and may quite possibly have been in continuous use from Roman times to our own day. The total length of this preserved portion is a few yards over 2½ miles, and it comes to an end sharply at the gate which is the entry to Buckinghill Farm. Here the modern road diverges right away to the east, running round the base of the hill which the Stane Street climbs and surmounts. It is in use up to the farm buildings of Buckinghill Farm, running through this private field as a typical *raised causeway*, once perhaps normal to its whole length but now lost in the public portions of the road.

After passing Buckinghill Farm the Stane Street runs in a very slight curve up the spinny along the side of a ravine. It is most clearly marked by a partial *cutting* just behind (to the west) of Bearehurst House,

runs under the lodge of a new house below Minnickwood Farm, previous to which it climbs by another well-marked cutting sunk into the hill, and nowadays overgrown with yew and holly.

Thenceforward it must be traced by careful examination through the open field. At this point it is not sufficient to take the straight line and look for the road upon it; for by an accident, the probable cause of which I will now proceed to discuss, the Stane Street, as it approaches the buildings of Anstie Grange Farm, diverges slightly eastward from its alignment (not 200 feet at its most distant point), and forms a sort of flat arc of which the direct alignment is a chord. Why does the Stane Street behave so curiously at this point? There is, I think, a conjectural argument that may be made out.

On a former page of this book (pp. 97–100) I spoke of the point north and a little east of the house called "Moorhurst" which formed the terminal point where the alignment coming northwards from the Borough Hill near Pulborough and the next alignment coming southwards from Dorking Gap met. But this point must be described in more detail than I

then gave to it, if the slight divergence of the road at this point is to be understood.

The straight line of the southern alignment from Pulborough and Alfoldean northward and so through Ockley strikes exactly the gate between Anstie Grange Farm and its barn, and from precisely the same point the next or northern limb that negotiates Dorking Gap takes its rise.

From this it might be imagined that the high scaffolding and pole, or whatever other mark was used for drawing the alignments from distant point to distant point, was set up by the Roman engineers precisely at this spot.

But it is not likely that this was the case.

Anyone visiting the locality will see why. All this shoulder of Leith Hill is a difficult one to turn. It presents no one conspicuous point from which a commanding observation could be taken north and south—at least not one point upon the fairly flat shelf below the last steep rise to the summit. This shelf is undulating, and any mark set upon one of its hollows would be hidden from the north and the south unless it were very high indeed. On the other hand, a mark set well up on the hill

THE TOWER, LEITH HILL

(as, for instance, on the 800-foot summit, which is included in Anstiebury Camp itself) would have led the road far too high up the steep hillside and condemned travel to a useless and even dangerous labour.

What would seem to have been done is this :—

Just where the steep part of the hill begins, there is an open field lying immediately under the wood (a comparatively modern plantation) called Ryefield Copse. Thence a moderate scaffolding commands a view to the north and to the south. From this point of vantage, which is well above the 500-foot contour, the engineers would seem to have directed the placing of somewhat lower marks, one to the north the other to the south—the one to the south commanding the view over the Weald, but hidden from the Dorking Gap : the one to the north commanding the Dorking Gap but hidden from the Weald. The southern one was perhaps fixed upon the ridge (now crowned with pines) immediately behind Bearehurst at a height of some 450 feet. The northern one may well have stood on the high ground rather more than half a mile to the north,

which all but touches the 500-foot contour and exactly corresponds to the long spinney lying east of Folly Farm in South Holmwood. An alignment southward from this last and another alignment northward from the mark near Bearehurst would meet at the gate of Anstie Grange Farm. But between Bearehurst and Anstie Grange Farm the road deflected somewhat from this exact alignment in order to avoid the beginning of the steep which the exact alignment crosses. Its goes round, therefore, a trifle to the east (200 feet at the most, as I have said), the point of its greatest distance from the direct alignment being a point where it crosses the small watercourse flowing from Ryefield Copse, which later becomes the anonymous "brook" of Brookwood and flows under the railway 500 yards south-west of Holmwood Station.

From Anstie Grange Farm the line of the road is easily followed. It runs through the copse called Betchet's Green Copse right in front of Redlands, across the long spinny east of Folly Farm, where I have supposed the secondary mark to be established, and so on to an outlying projection of Redland

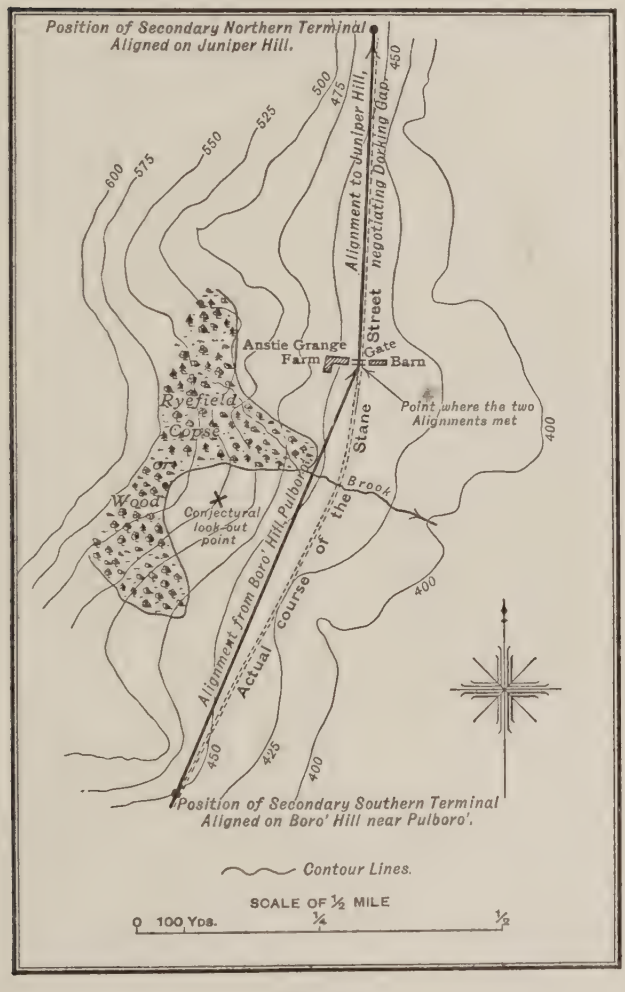

Position of Secondary Northern Terminal
Aligned on Juniper Hill.
Alignment to Juniper Hill, negotiating Dorking Gap
Street
Anstie Grange Farm
Gate
Barn
Point where the two Alignments met
Rye field
Copse
Wood
Conjectural look-out point
Stane
Brook
Alignment from Boro' Hill Pulborough
Actual course of the
Position of Secondary Southern Terminal
Aligned on Boro' Hill near Pulboro'.
600
575
550
525
500
475
450
425
400
Contour Lines.
SCALE OF ½ MILE
0 100 Yds.
¼
½

FIG. 20.

Wood. Here an *exact* alignment would compel the road to run for some 50 yards or so in the bed of the little stream that runs through Hambridge Bottom. To avoid doing this, it diverges very slightly to the left or west, but soon recovers its alignment, passes within a few yards of the Smithy on Holmwood Common, and keeps its straight course to the neighbourhood of the crossing Bent's Brook.

Had the Stane Street continued to go straight on from that point, it would have been condemned to the impossible task of crossing right over Tower Hill and of going up and down the very steep and broken summits which dominate Dorking from the south and east. It did not do this. It deflected in a curve which takes it right through the buildings of Bent's Brook Farm and slowly swings it round to the sand-pit at the bottom of Tower Hill. It is next identical with the modern road as far as the next cross-roads in Dorking itself, which lead to the Nore on the west and the Waterworks on the east. At this place, where the modern road leaves it and deflects round the hill to the west to avoid the steep, the Roman way is pointing

straight at that junction of the three main Dorking Streets, High Street, West Street, and South Street, which I have conjectured to be the centre of the third station or camp. Its course between this point at the cross-roads and the meeting of the three main streets in the town (where it has been seen) is lost, and I can find no trace of it in local records of building. The gap is a yard or two over half a mile. I can see no reason, however, why it should not have proceeded in its straight course, which would not have imposed upon it a gradient steeper than others which it attacks in the course of its 50 miles. Supposing it to have pursued this straight line, it would form the foundation of the western front of Dorking Workhouse, would pass behind the houses on the east side of the South Street, and would soon come to the central point in Dorking which I have named.

D

FROM DORKING TO MERTON ABBEY

If we take (as I conceive we are bound to take) the position of the third *mansio* or station as lying somewhere within 100 yards of the junction of West Street, High Street, and South Street, Dorking: and if for the purpose of our convention we take a terminal exactly at this junction, we have from that point to the south end of London Bridge measured in a straight line precisely 22 miles. Indeed that measurement is so nearly accurate, that though there is a very slight excess, it is certainly an excess of less than 50 yards.

The first thing that strikes us in such a stretch is that it is too long for a single day's march. Not (as was discussed in an earlier part of this book) that troops cannot and have not frequently marched for very much longer distances, but that the regular establishment of a day's journey from post to post must always be considerably less, and (as I

have pointed out elsewhere) in the neighbourhood of more or less than 13 miles : preferably rather slightly less than slightly more.

We may therefore take it as certain that a fourth *mansio* or station broke this line somewhere between Dorking and London.

In our general considerations of the Stane Street, general arguments were put forward to show why Merton might probably be regarded as the site of this station. To these arguments we will return more particularly in their proper place in this section, but for the purposes of defining the fourth stretch of the road, as I conjecture it to have been, I will take for its terminal the point of *Merton Bridge* where the main modern road from London crosses the River Wandle, and I shall hope to establish in what follows the connection between this site and the fourth camp upon the road between Chichester and London.

I cannot, however, here pretend to the same conjectural accuracy as I believe to have been possible in the case of the Dorking station. I can only premise that in the immediate neighbourhood of this river crossing the fourth station lay, and I shall later discuss whether it was to the north or to the south of

that crossing, and what its position may have been to the mediæval Abbey of Merton.

Of this fourth section of the road (as I shall presume it to be) only a small portion remains visible to-day, and even the parts which can be re-established fairly certainly from analogy or from the surer guide of adjacent remaining portions, form but a small proportion of the whole distance. Measured along what we shall in the ensuing argument discover or suppose to be the actual line of the road, the distance from the point taken in Dorking where West Street and High Street meet, to the Bridge over the Wandle, is 14 miles.

The distance from our terminal in Dorking to the nearest point at which (as we shall see) the camp could, with any probability, have been established, is 12 miles and $4\frac{1}{2}$ furlongs.

Now, whether we take the shorter or the longer estimate, whether we regard that fourth day's march as having been plotted out for a distance of more than 14 miles to a point just north of the Wandle, or for a distance of just over 12 miles to a point just south of the complicated crossing of that river, the total amount of the road in that

stretch which remains visible is remarkably small. The certain portion actually traceable by the eye to-day is but $2\frac{1}{2}$ miles, if that (from the summit near Cherkley Court to the point where the road is lost upon Epsom Downs). Even if we add to this the small sections that have appeared in the widening of the Burford Bridge road, the indications of the passage of the Stane Street between Dorking and Burford Bridge and the trace which it has left upon the lawn of Juniper Hall, we do not get 3 miles out of the total distance. All the rest is conjectural.

Luckily, however, that part of the road which can be certainly established has been preserved in a situation where *an exact alignment pointing to London Bridge can be proved*, and this, with a number of other circumstances to which I shall refer the problem, gives us the ground we have for believing the road to have crossed the Wandle at Merton.

Upon leaving that camp which we must believe to have disappeared under the turning and re-turning of the earth within the inhabited district of Dorking, the Stane Street made at once for that crossing of the river Mole

to which it was directed in the first general survey made by the Roman engineers.

That general survey was, as we have seen throughout this book, invariably conducted from one height to another in great "sights," from the line of which the road might be compelled to deflect (as in fact it had deflected along the broken hills to the south of Dorking), but to which it always returned at the earliest opportunity. Before that deflection round the broken hills south of Dorking, we left the Stane Street pointing directly at a piece of high ground upon the shoulder of Juniper Hill, and with that point was aligned the crossing of the river Mole. With that direction exactly corresponded the passage at Burford Bridge, which remains of the Roman road prove to have been the exact point where the Stane Street crossed that river, just as the modern bridge at Pulborough and the modern bridge at Alfoldean are equally certainly crossings restoring the ancient Roman passages of the Arun.[1]

[1] As a matter of fact the modern bridge is some fifty feet *east* of the point where the Stane Street crossed the Mole. The line can be distinctly seen crossing the meadow on the north bank, a meadow which is bounded by the London Road.

From the central point in Dorking just named, the Stane Street is lost during the next mile and 5 furlongs which take it to Burford Bridge. The only indication we have of it in this section is the observation recorded by Aubrey and Camden, that it passed through the north-western corner of St. Martin's churchyard.[1]

I have carefully examined the whole ground from the churchyard to Burford Bridge upon this alignment, and can find no certain trace of the road.[2] There are, indeed, here and there, very slight indications in the shape of a ridge or bank, but short of excavation by the proprietors of this section, I do not think it can be established at any one place.

After crossing the Mole, however, it is quite clear, though not so clear as it was some years ago when, during the widening of the present road and the making of a cutting for it, the junction of the Stane Street coming in

[1] This has been disputed, apparently upon the principle that modern science must dispute every authentic ancient record. But we have for it not only ocular testimony, but the fact that a direct alignment would lie precisely across that corner of the churchyard.

[2] The right-of-way and footpath across the fields, which has sometimes been inaccurately confounded with the line of the Stane Street here, does not correspond with it.

across the field to the west was clearly seen. It is probable that the modern road from the summit of the hill above Burford Bridge as far as the lodge of Juniper Hall corresponds or nearly corresponds with the Stane Street. It is true that the exact alignment would take the Roman road over the high bank to the east of this section of the modern road, but we know from analogous places that the Roman way would have been slightly deflected to avoid a pitch of this kind.

After the lodge at Juniper Hall the modern road leaves the Stane Street, the next few miles of which are, with the exception of one or two short gaps, singularly clear.

It has been seen in the course of making the lawn at Juniper Hall, clearly crossing that lawn under its magnificent cedars and between the house and the high road. At the back of the house it breasts the steep of Juniper Hill and curves round that precipitous promontory, rising from the 200-foot contour to the 400-foot in a long sweep, which runs parallel to and just above the public way called the Downs Road.[1]

[1] I use the word "public" rightly or wrongly. There may be no right-of-way. At any rate the land is enclosed.

On leaving the lodge upon Juniper Hill, the Stane Street has to cross a bit of open Down and a very steep combe lying within the private grounds of Mickleham Downs House. I believe it to be indisputable that the Roman way deflected to the east, as the modern lane does, and did not cross the combe directly, the northern side of the combe being too steep for it. But it is remarkable that before the combe, on the open Down, where it had every chance of preservation, it is entirely lost. No explanation can be offered for this, but it is analogous to hundreds of other cases in Britain and Gaul, where a Roman road on the open and uncultivated chalk, where it would have the best chances of survival, is suddenly broken by a gap in which it totally disappears. At any rate, on the northern or further side of the combe it begins one of the most interesting of those sections in which it has most clearly survived.

Nowhere else in the home counties can a Roman road which has not been metalled for modern use be followed so easily. Nor has any other remained in such thorough preservation of its original condition. The

stretch is one of 2 miles, and there is a right-of-way through the whole length. It bears the local name of Pebble Lane, as also of that mysterious popular and ancient term Ermine Street, which we find attached not only to the great northern road out of London, but to other sections of Roman roads up and down the country without any apparent topographical connection.

For the first mile of this section, the Stane Street is a modern lane pointing as straight as an arrow just under 29° East of North. And it is particularly to be observed that this direction also points precisely at the southern terminus of old London Bridge. No sight dominating the Thames valley could be taken from this point. Where such a sight could be found I will discuss in a moment, first premising that a mark must have been taken at what I have called the point "C" upon the promontory of Juniper Hill, which the reader will find discussed upon pp. 102–4; the intervening part between the origin of this straight section near Mickleham Downs House and the point further on where the first view of the Thames valley could be obtained must have been established by back-sighting.

All this first mile, then, of the survival runs on a clearly defined bank, which is that of the old Roman way. It skirts the property called Cherkley Court, plunges into a steep hollow falling from a summit of 411 feet to 360, and then takes an extremely steep gradient up to the lodge of the house called Tyrrell's Wood. It was at this second summit (just over 430 feet) that I believe the sight to the Thames valley was taken. On a clear day one can from this point discover London, and in particular (though now it is nearly always veiled in a smoky haze) the point where the Roman bridge of London crossed the Thames.

The distance is considerable. It is one of $17\frac{3}{4}$ miles, but similar stretches of alignment, though rare, are to be discovered in the scheme of Roman roads in this country and in Northern France. And at any rate, the alignment is far too perfect to be considered for one moment a coincidence.

As the Stane Street proceeds northward from this high summit, the modern lane does not exactly follow it, but goes now to the left, now to the right, using the ditch which flanked it upon either side, until, at the end

of the 2-mile stretch, it comes to that difficult junction which I have already dealt with on pp. 109–10. I will not here repeat the arguments there used, but it is worth while telling the reader what difficulties lie in the way of my own hypothesis.

The point in question where the two miles of straight and visible road end, is one at the summit of a hill just above and to the south of Thirty Acres Barn. At this point the modern lane branches off at an angle of about 15° to the east, and would seem to be making for Croydon. It has been hardened in the remote past, still bears the traditional name of the Ermine Street, and has always been regarded as the continuation of the Roman road. By my hypothesis the main line of the Stane Street did not follow this road branching off to the east, but continued right on to the crossing of the Wandle and to London Bridge. No indication of it remains. A ploughed field with no trace of a way upon it sweeps down to the valley. Beyond this again there is open grass, and then for many miles a succession of private grounds, woods, and the outskirts of Epsom and Ewell, until one reaches the neighbourhood of Merton

THE BANK OF THE WANDLE AT MERTON ABBEY
(WATERCRESS BEDS)

Abbey itself, and during all those miles no trace of the road. If it did, as I believe, follow this alignment, there are at any rate no clear remaining evidences of its passage. It should have crossed quite close to the Durdans, not 200 yards to the east of that house, through Pit Place and Pit Place Farm, crossing the main line of the L. B. & S. C. Ry. close to Hall's Bridge, and so on, missing Ewell just as it missed Epsom, proceeding through Nonsuch Park, going right through the grounds of West Hill House, within a few yards of the school building at Morden, until it struck the bifurcating ways at Morden Hall upon the Wandle.[1]

The whole of my argument is based upon the exact alignment of the Stane Street where it has survived with the direction of London Bridge, and upon the identity of the crossing of the Wandle with Merton Abbey, and with the royal land of Merton.

This latter point will seem perhaps of less

[1] There have been certain finds within the neighbourhood of this line, and Roach Smith (*Journal of the Archæological Association*, vol. xxxii. p. 481) argues for it in Ewell Parish, but not anywhere near the alignment I take. It is of course evident that no indication not identical with the alignment is of service to my hypothesis.

importance to those who have not visited the spot than it does to me, but I confess that a survey of the ground is not unconvincing.

You have here a marsh across which it has been impracticable to attempt a causeway. You have a road forming an elbow round that marsh following land which the contours of the Ordnance Map, being too few, do not distinguish, but which forms everywhere a sort of bank above low-lying flooded meadows. You have a bridge taking the Wandle just where its various streams unite. You have a modern road immediately beyond that bridge (the Merton road and Tooting High Street) which, though it continually deviates by a trifle east or west, is quite evidently based upon the alignment in question. Finally, you have a great religious establishment and a royal villa fixed at Merton during the Dark Ages.

You have, therefore, certain communications through the Dark Ages between that point and London, that point as certainly a main crossing of the river (which nearly everywhere in the Dark Ages corresponded with a Roman road, and which we have found so to correspond on this road at the crossings

of the Mole and the Arun), and you have the analogy of all the early religious houses, or nearly all, standing on one of the few similar arteries which maintained travel until the Middle Ages.

These considerations have compelled me to believe that Merton represents the fourth station upon the road, and that, though the alignment is lost through all those miles between Epsom and Morden Hall, the loss is accountable to the same causes as have destroyed all vestige of Roman roads and of the Stane Street itself through cultivated land elsewhere, and even upon untouched open chalk Down.

E

FROM MERTON ABBEY TO LONDON BRIDGE

The last section, from the crossing of the Wandle at Merton Abbey to London Bridge, should provide, one might think, the most ample material of all, for it has been the most continuously inhabited and has lain for centuries within a walk of a great city. It has, upon the contrary, provided me with none.

The building of South London, had records serviceable to archæology been kept, would certainly have furnished a mass of testimony as to the passage of the Stane Street through it. But as no records of any sort seem to have been preserved, the task is perfectly hopeless.

We have (as I pointed out in my section upon the modern divergences upon p. 205) the names Newington Butts and Newington Causeway. We have also the place-name Streatham (but this more probably was drawn from a road coming in from the south-east and joining the Stane Street), and we

HIGH STREET, CLAPHAM

have, as London Bridge is approached, a whole series of finds which indicate the passage of a great Roman way south from the river, upon a line more or less corresponding to the Borough.[1] But of anything like the proof which we have found for the rural portions of the way, we look in vain. All we can say is what has been said before—that the strict alignment taken from Epsom Downs to Old London Bridge carries us over the Wandle precisely at Merton, and that of the $7\frac{1}{2}$ miles between that point and London Bridge, at least 4 exactly correspond with the alignment (in particular, the long stretch between Clapham and Newington), and that the remaining $3\frac{1}{2}$, less than half of the whole, are but slight divergences from it.

It is possible or probable that further research will establish at least two points upon this line, and two would be enough to make certain that hypothesis upon which I have worked in drawing the last stage of the Stane Street in a direct line from Merton Bridge to that spot just north of St Clair's

[1] Thus the cemetery discovered in 1818, the Burnt Burial found in the building of Southwark Town Hall, the same in the Borough High Street, &c.

Church behind London Bridge Station where the Roman Bridge and its mediæval successor abutted upon the southern bank of the Thames.

But until such evidence is forthcoming we have nothing but the few indications I have mentioned to establish the line, and the strong argument that the alignment on Epsom Downs is coincident with that line.

In such an unsatisfactory state I am compelled to leave the last and most difficult problem connected with the road.

NOTE A

ON THE ALIGNMENT FROM LEATHERHEAD DOWNS TO OLD LONDON BRIDGE

THE reader will have noted in the text repeated allusions to the precision of the alignment of the Stane Street upon the Southern Bridge end of old London Bridge during the last limb of that highway.

As no more than 2 miles (or a little less) of the original road remains visible, and that at the end of the alignment furthest from London Bridge, it might be doubted at first sight whether the coincidence upon which my alignment is based can be properly established. Most writers who have dealt with this matter say vaguely that the Stane Street in this section of its trajectory "points generally in the direction of London Bridge," or "appears to point towards London Bridge." I have taken measurements as accurate as were in my power, and I think I can show that the degree of precision with which the alignment points at old London Bridge is far greater than has been or might be imagined.

The remaining straight piece of the road upon Leatherhead Downs becomes first visible at a

point upon the summit of the steep north side of Mickleham Combe, just at the end of the boundary between Cherkley Court and the property called Mickleham Downs.

The line, which is absolutely unswerving, can be followed in the clearest fashion from summit to summit until one reaches the top of the hill above Thirty Acres Barn. The total distance from the one point to the other I make to be 3484 yards, and the angle at which the perfectly direct line of these 3484 yards is driven I make to be as nearly as possible 28 degrees 54 minutes East of the Meridian, or 61 degrees 6 minutes North of East.

Now, what limit of error is one to allow in this measurement? It is a matter, of course, for the judgment of anyone who chooses to visit the spot and to notice how the line can be followed from summit to summit. An old road is not a mathematical line. It has breadth, and its edges are sometimes broken; but it is safe to say that an error of 5 yards upon either side of the terminal mark, or a total error of 10 yards, is very much greater than the error that would be made even without instruments of precision by an ordinarily accurate observer measuring only by the unaided eye and taking back-sights from one point to another. I say that 5 yards either way would be too great an error. Personally, I am quite convinced that a degree of accuracy one-fifth of this, or 1 yard upon either side, was

easily obtainable when I measured the Way. But my argument is only the stronger if I admit so large a margin of error as 10 yards. Now, a margin of error 10 yards in 3484 yards gives an angular margin of error of just under 10 minutes of a degree. When I add that such an angle is equivalent to a third of the apparent diameter of the sun or moon, it will be apparent that I am allowing a very wide margin indeed for neglect or bad sighting.

Well, the total distance from the point of origin at Mickleham Combe to the present embankment on the southern shore of the Thames near London Bridge, I make to be 33,050 yards—within a very few yards more or less. Here the uncertainty is of no vast importance to a hundred yards or so, for one three-hundredth more or less in the length of so exceedingly prolonged a triangle is of no appreciable effect in the measurement of its angles. The distance is certainly over 33,000 yards, and certainly under 33,100.

In other words, the total alignment up to the Thames is a good deal less than ten times the length of the part still visible upon Leatherhead Downs. A possible error of 10 yards, therefore, in the measurement of the angle of the former, becomes upon the bank of the Thames less than 100 yards—or less than 50 yards either way. It is, as I have said, more probable that my true limits of error were but one-fifth of this very ample margin. If, therefore, the alignment pro-

longed falls well within that limit of error, we may take our point as established. Now, the alignment does fall well within it, as anyone may see for himself by striking upon the 6-inch or 25-inch map the angle I have postulated—28 degrees 54 minutes East of the Meridian. He will find that from the point of origin I have taken it strikes as nearly as possible the point behind London Bridge Station and 50 yards to the east of modern London Bridge, where old London Bridge, and therefore presumably the Roman bridge, started to cross the river.

But there is more than this. The line so drawn upon the map will be found to strike the Marshes of the Wandle precisely at that point outside the paling of Morden Hall where four Ways meet and where the "elbow" gets round the Marshes. This "elbow" strikes off to the north past Morden Station, the Prince of Wales public-house, the Congregational Church, and turns to the east at the corner of Grove House grounds. The alignment is exactly recovered again at the point in Merton High Street where that street turns round north-eastwards and makes directly for London, immediately after the crossing of the Wandle by the bridge.

The line further prolonged exactly coincides with the Clapham Road; passes immediately in front of the remains of the Roman building found in 1840 a hundred yards north of St. George's Church in Southwark. Four hundred yards

further on it passes immediately along and in front of the Roman pavement discovered just at the corner of St. Thomas's Street, and 100 yards further again it passes immediately in front of another pavement and traces of walls and a building found in 1840 upon the site of what had formerly been St. Thomas's Hospital.[1]

Within fifty yards of the river it passes right over the Roman remains marked in Brock's Map, and finally strikes the river bank just where the southern abutment of old London Bridge lay, to the east of the modern bridge.

Exactitude of this sort cannot possibly be a coincidence, and is, I think, sufficient to prove the thesis I have put forward in this book.

[1] Exactly where the Tube Station is to-day.

NOTE B

THE PARALLEL OF THE PORT WAY

The reader will have noticed in the pages of this book many references to the loss of a Roman road without explicable cause: that is, the loss of some parts of an alignment without any remaining condition of soil or cultivation to account for such loss; while under conditions apparently precisely similar other portions of the alignment have survived.

The fact that phenomena of this sort are apparent in the Roman road system of all Northern Gaul and Britain is the foundation of the argument upon which I have based my conviction that the Stane Street, though it has utterly disappeared from beyond Epsom Racecourse to at least as far as Morden Hall, and though no physical remains of it have been discovered up to the Thames itself, none the less did follow up to the river the alignment of the portion still visible upon Leatherhead Downs.

Now, the best example of this sort of inexplicable loss, and equally inexplicable survival over a considerable stretch (or at any rate the best example in this country), is to be found in the

latter or northern portion of the Port Way—the Roman road running from Silchester to Old Sarum. I have therefore carefully examined this stretch, in order to come to a just conclusion, and I discover it to prove beyond doubt the possibility of a Roman road being utterly lost over very great stretches of its alignment, though permanently surviving over others in precisely similar conditions.

I may, to support the strength of this conclusion, quote the interesting fact that so great an authority as Mr. Haverfield has been misled by the apparent disappearance of this particular road. He asserts (*V.C.H., Hampshire,* vol. i., p. 320) that it has not been noticed "in the immediate vicinity of Silchester," nor even looked for, and believes it to be untraceable in the portion (16 miles in length) to which I am alluding: that is, the portion between the Bourne valley and Silchester. Further, the scholarly authors of the monograph upon Silchester (*ibid.*, p. 350, &c.) give the road upon their map as *conjectural* only outside Silchester and as coming in at the *South* Gate: as a fact, it came in by the West Gate, as we shall see.

In other words, the case appears to be one of complete loss without proof and only with a conjecture of alignment. It so happens, however, that upon close examination one finds the northern portion of the Port Way to be the example of something very different, namely of that alter-

nate loss and survival all upon one alignment and each for no discoverable cause, which I have postulated in my book. For, so far from the whole of these 16 miles being obliterated, they afford a very chain of disjointed surviving sections; and some parts of the surviving sections are so well known and so clear that I confess a certain astonishment at the error into which Mr. Haverfield and his colleagues have fallen.

I will, for the benefit not only of the argument in general, but of those who are interested in the archæology of Hampshire in particular, give these sections point by point.

The "Port Way" is an existing road actually in use to the west of the Bourne valley from the neighbourhood of East Anton past Finkley House to a farm called Middle Wyke Farm. Upon a height just above this last, where it overlooks the Bourne valley, its use as a modern highway ends. It is from this point, over 16 miles from Silchester, that the "lost" section which is of such interest to our argument begins.

The first 3½ miles of it (across the Bourne valley and through Bradley Wood to the railway) I am not yet competent to discuss in full, but the remaining 13 miles—from where it crosses the railways a mile south of Lichfield Station to where it enters Silchester—I can describe in detail.

Ascertainable.—It forms a parish boundary from the point called Clap Gate just on the railway, for

a distance of 3 miles 5 furlongs, and it is further evident to the eye as a green way forming the boundary of plantations for 2¾ miles of this distance; for the remaining three quarters of a mile it is actually in use as a metalled road. It continues to be clearly apparent in the same exact alignment for nearly another mile, climbing the hill known as King John's Hill and nearly reaching the 700-ft. contour. At this point it is very nearly coincident with the watershed separating the Thames valley from Southampton Water. At the summit of the hill, for some undiscoverable reason, though the soil is chalk and the Down quite open the track that has come into use diverges wholly first to the left and then to the right in great bends from the Roman road. It is an exact parallel to the case which we found upon Mickleham Combe (p. 273) in the case of the Stane Street.

Lost.—For the next 5 miles and more, generally of fall, there seems to be no trace of the Port Way left.

Ascertainable.—The road reappears again, though very faintly, rather less than 2½ miles further on, just west of a farm called Foscot Farm; from that farm to Silchester itself (a distance of 5½ miles) its trajectory is of peculiar interest.

Lost.—For the first quarter of a mile (going eastward from the farm buildings) all visible trace upon the surface has entirely disappeared: but the people of the place still talk of "the old

road to the farm." It is possible that a marshy patch in a depression just here may account for the breach of continuity, and there is a divergence in the shape of a modern lane going round to the north; but this does not explain the total loss of the road on the fields above the depression on either side.

Ascertainable.—At the head of this short stretch, just over a quarter of a mile from the farm buildings, the Port Way suddenly appears again, fully visible, and much resembling portions of the Stane Street upon the cultivated land of the Upper Weald. It stands broad and slightly raised, still keeping its exact alignment for just on a quarter of a mile, then it disappears suddenly as a road, *but remains traceable and ascertainable in the shape of a ridge supporting a hedge dividing two fields,* and in this shape it continues for another quarter of a mile and makes altogether half a mile of clearly ascertainable section.

Lost.—No apparent trace of it can be found during the next mile and three-quarters.

Ascertainable.—It reappears as a continuous though slightly raised and often breached line of slightly elevated ridges from Skate's Farm, near Tadley, to Tadley Bridge. It did not cross the water precisely at the present bridge, however, but a yard or two higher up the stream.

Lost.—From the junction of the road just below the Inn at Tadley it disappears for a furlong.

Ascertainable.—Over the next furlong, covering

the space from a cottage to the edge of Pamber Forest, it exists in the shape of a commonly used track, but not raised in any way nor traceable by its material.

Lost.—Its line through Pamber Forest itself is precisely 5 furlongs in length from the western to the eastern edge of the wood, and in this old piece of untouched timbered land, where of all places it should have survived, the Port Way utterly disappears.

Ascertainable.—On emerging from the trees and in the swampy bottom between Pamber Forest and Beggar's Bridge Wood (or Beggar's Green Wood) it reappears quite clearly. This reappearance of it as a raised mound is only interrupted by the stream which drains this marshy field. It appears precisely on the edge of the forest, runs across the field and climbs into the wood opposite. It is intermittently observable as far as the high road, half a mile distant, and though very faint just before striking that high Road (which it does just at the foot of the hill beneath Silchester village), there is for some 10 yards upon the other side of the road a marked continuation of it.

Lost.—We are now within half a mile of the Roman town of Silchester, and during that half mile all trace of it has gone, unless indeed it may have been discovered in the course of digging in the grounds of Silchester Hall, right in front of which country house it passes. It has been con-

tinuously pointing and is still pointing in its last appearance, *not* at the South Gate, but at the West Gate of Silchester, just before the entry to which it joined the other great Roman road, coming down from Gloucester through Cirencester, Cricklade, Speen, &c.

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THE END

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